FEEDING MECHANISM AND DOCUMENT MANAGEMENT DEVICE

TECHNICAL FIELD

The present disclosure relates generally to a technical field of document management device, and more particularly, to a feeding mechanism and a document management device.

BACKGROUND

With the development of science and technology, self-service device is widely used in daily life. As a kind of self-service device, document management device is used to manage documents.

When using the document management device, staff need to store a prepared document in a document management cabinet of the document management device in advance. The existing document management cabinet is manually stored with the documents by the staff through filling a material storage box of the document management cabinet in advance. However, in such storing method, the staff can only store a limited number of documents in a single time. When the documents in the material storage box are all taken out, the staff need to open the material storage box again to store the documents, which is inefficient. Therefore, how to design a feeding mechanism and a document management device with the feeding mechanism, through which feeding mechanism, all the material storage boxes in the document management cabinet can be fully stored with documents at one time by the staff, such that the number of the stored documents for each time of storage, as well as the storage efficiency, can be improved, is a technical problem to be solved urgently by this disclosure.

SUMMARY

The object of the present disclosure is to provide a feeding mechanism and a document management device, aiming at the above technical problem. The feeding mechanism of this disclosure is capable of storing a large number of documents and conveying the documents in the feeding mechanism to a material storage box through a mechanical arm of the document management device, thus improving the single storage capacity and the storage efficiency of the document management device.

In a first aspect, a feeding mechanism is provided, including:

a material frame, which is uniformly distributed with a plurality of installation positions;

a plurality of material storage boxes, each of which is detachably installed inside each of the installation positions and has at least one material outlet;

a control device, which is arranged in the material storage box; and

an in-position detection device, which is arranged inside each installation position and communicated with the control device;

wherein, when detecting that each material storage box is installed in position along the installation position, the in-position detection device feeds back a detection signal to the control device, and the control device controls each material outlet to open.

As an optional embodiment of this disclosure, the material frame includes:

a frame body, which is arranged inside with a containing chamber;

a plurality of spacers, which are arranged inside the containing chamber at intervals to form each of the installation positions inside the containing chamber;

a rotation driver, which is arranged outside the frame body and drives the frame body to rotate.

As an optional embodiment of this disclosure, at least two groups of the spacers are arranged along the containing chamber for spacing the containing chamber to form at least two installation positions.

As an optional embodiment of this disclosure, each material storage box is arranged with a storage space for storing a document, and a bottom of each material storage box is arranged with a plug structure, wherein a plug cavity is correspondingly arranged along each installation position, when each material storage box is inserted into the plug cavity, each material storage box is locked by a positioning locking part which is arranged along each installation position, wherein the positioning locking part is an elastic switch; a top of each material storage box is arranged with a rotation handle device, which is movably arranged at the top of each material storage box.

As an optional embodiment of this disclosure, each material storage box is arranged with a storage space for storing a document, and a bottom of each material storage box is arranged with a sliding connection structure, wherein a sliding connection groove is correspondingly arranged along each installation position, when each material storage box is in sliding connection with the sliding connection groove, each material storage box is locked by a positioning locking part which is arranged along each installation position, wherein the positioning locking part is an elastic switch; a top of each material storage box is arranged with a rotation handle device, which is movably arranged at the top of each material storage box.

As an optional embodiment of this disclosure, the in-position detection device is arranged adjacent to the positioning locking part, and includes a photoelectric sensor or a position sensor, wherein after detecting that each material storage box is locked at each installation position, the in-position detection device feeds back

the detection signal to the control device, and the control device controls each the material outlet to open.

As an optional embodiment of this disclosure, the frame body has a cylindrical roller structure, and the spacers are uniformly distributed around an axis of the frame body to form the plurality of installation positions which are uniformly distributed along the axis of the frame body, and each one material storage box corresponds to each one installation position.

As an optional embodiment of this disclosure, the frame body has a rectangular box structure, and the spacers are uniformly distributed around a circumference of the frame body to form the plurality of installation positions which are uniformly distributed along the circumference of the frame body, and each one material storage box corresponds to each one installation position.

In a second aspect, a document management device is disclosed, including at least two document management platforms which are jointed together, wherein the document management platform includes a cabinet body; the above feeding mechanism which is detachably and rotatablely arranged under the cabinet body; a bidirectional honeycomb storage module which is arranged along both sides of the cabinet body relative to an upper portion of the feeding mechanism; at least one group of document conveyor with one end facing the feeding mechanism and the other end facing the bidirectional honeycomb storage module; a document acquirement operation module which is arranged at the cabinet body; and a document invalidation module which is embedded inside the cabinet body.

In a third aspect, a document management device is disclosed, including a document management platform and a document acquirement operation module which are arranged adjacent to each other, wherein the document management platform includes a cabinet body; the above feeding mechanism which is detachably and rotatablely arranged under the cabinet body; a honeycomb storage

module which is arranged along the cabinet body relative to an upper portion of the feeding mechanism; a document conveyor with one end facing the feeding mechanism and the other end facing the bidirectional honeycomb storage module; and a document invalidation module which is embedded inside the cabinet body.

This disclosure provides a feeding mechanism and a document management device and has following beneficial effects. The feeding mechanism includes a material frame which is uniformly distributed with a plurality of installation positions; a plurality of material storage boxes, each of which is detachably installed in each of the installation positions, and has at least one material outlet; a control device, which is arranged in the material storage box; and an in-position detection device, which is arranged in each installation position and communicated with the control device. When detecting that each material storage box is installed in position along the installation position, the in-position detection device feeds back a detection signal to the control device, and the control device controls each material outlet to open. Through the feeding mechanism, a plurality of material storage boxes full of documents are installed inside the material frame. When the plurality of material storage boxes are installed in position, the control device controls each material storage box to open the material outlet. At this time, the document conveyor of the document management device moves the document to the storage module of the document management device along the material outlet, thus improving the single storage capacity and the storage efficiency of the document management device .

BRIEF DESCRIPTION OF THE DRAWINGS

In order to more clearly illustrate the technical solution in the embodiment of the present disclosure, the drawings used in the embodiments or prior arts will be briefly introduced. It is obvious that the drawings in the following description are

only some embodiments of the present disclosure. For ordinary technicians in the present art, they can also obtain other drawings without paying creative labor according to these drawings.

Figure 1 is an overall structure diagram of a feeding mechanism according to a first embodiment provided by this disclosure.

Figure 2 is a first structure diagram of the feeding mechanism according to the first embodiment provided by this disclosure.

Figure 3 is a second structural diagram of the feeding mechanism according to the first embodiment provided by this disclosure.

Figure 4 is an overall structure diagram of a feeding mechanism according to a second embodiment provided by this disclosure.

Figure 5 is a partial structure diagram of the feeding mechanism according to the second embodiment provided by this disclosure.

Figure 6 is a partial structure diagram of the feeding mechanism according to a third embodiment provided by this disclosure.

Figure 7 is an overall structure diagram of a document management device according to a first embodiment provided by this disclosure.

Figure 8 is a first structure diagram of the document management device according to the first embodiment provided by this disclosure.

Figure 9 is a partial structure diagram of a document management device according to an embodiment provided by this disclosure.

Figure 10 is an overall structure diagram of a document management device according to a second embodiment provided by this disclosure.

The reference number for each component in the drawings are as follows.

Feeding mechanism	1	Document management device	2
Material frame	10	Material storage box	20
Control device	30	In-position detection device	40
Installation position	11	Material outlet	21
Frame body	12	Containing chamber	121
Spacer	13	Rotation driver	14
Rotation handle device	22	Document management platform	50
Cabinet body	51	Bidirectional honeycomb storage module	52
Document conveyor	53	Document acquirement operation module	54
Document invalidation module	55	Frame	511
Document outlet	541	Face iris recognition module	542
Thermal printer module	543	Display module	544
Fingerprint module	545	Document reader	546
Document invalidation port	551	Honeycomb storage module	56

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

In order to make the object, technical scheme and advantages of the present disclosure clearer, the present disclosure will be further described in detail in combination with the drawings and the embodiments. It should be understood that the specific embodiments described herein are only used to explain the present disclosure and are not used to limit the present disclosure.

It should be noted that when an element/component is mentioned as being "fixed" or "arranged" on another element/component, it can be directly on another element/component or it may be indirectly fixed or arranged at another element/component through a third element/component. When an element/component is mentioned as being "connected" with another element/component, it may be directly connected with another element/component or it may be indirectly connected to another element/component through a third component.

It should be noted that the technical terms, such as “length”, “width”, “upper”, “lower”, “front”, “back”, “left”, “right”, “vertical”, “horizontal”, “top”, “bottom”, “inner”, “outer”, indicating the orientation or position relationship are based on the orientation or position relationship shown in the attached drawings. They are just for the description convenience and simplifying, rather than indicating or implying that the device or element referred to must have the specific orientation, or be constructed and operated in the specific orientation, and cannot be understood as the limitation of the present disclosure.

In addition, the terms "first" and "second" are used for descriptive purposes only and cannot be understood as indicating or implying the relative importance or implicitly indicating the number of technical features. Thus, the features defined with "first" and "second" can explicitly or implicitly include one or more of these features. In the description of the present disclosure, “several” or “a plurality of” means two or more, unless otherwise is specifically defined. In addition, the meaning of "and/or" in this disclosure includes three parallel schemes. Take "A and/or B as an example", which includes scheme A, or scheme B, or a scheme that both A and B satisfy. In addition, the technical solutions of various embodiments can be combined with each other, however, such combination should substrate on the realization of common technical personnel in the art. When the combination of

technical solutions is contradictory or impossible to achieve, it should be considered that the combination of such technical solutions does not exist and never falls into the scope of protection required by this disclosure.

Please also refer to Figures 1 to 10. This disclosure provides a feeding mechanism 1, which is used to feed documents to a document management device 2. Usually, the staff need to manually store the prepared documents into the document management device 2, that is, manually feeding documents to the document management device 2. However, in this feeding method, the number of the stored documents for each time of storage is limited, and the storage efficiency is low. In order to improve the storage quantity and storage efficiency, the feeding mechanism 1 provided by the technical solution of this disclosure includes a material frame 10, a plurality of material storage boxes 20, a control device 30 and an in-position detection device 40, wherein, each material frame 10 is uniformly distributed with a plurality of installation positions 11, each material storage box 20 can be detachably installed inside each installation position 11, and can have at least one material outlet 21. The control device 30 is arranged inside the material storage box 20, and the in-position detection device 40 is arranged inside each installation position 11 and communicated with the control device 30. When the in-position detection device 40 detects that each material storage box 20 is installed in position along each installation position 11, the in-position detection device 40 feeds back a detection signal to the control device 30, and the control device 30 controls each material outlet 21 to open. In this way, the staff can fill each material storage box 20 with documents, and then install each material storage box 20 into each material frame 10 along each installation position 11. After the installation is in position, the material outlet 21 of each material storage box 20 is opened. At this time, the document conveyor in the document management device 2 moves the document to a storage module of the document

management device 2 along each material outlet 21, which improves the single storage capacity of the document management device 2 and improves the storage efficiency of the document management device 2.

Please refer to Figure 1 and Figure 2, simultaneously. As an optional embodiment of this disclosure, the material frame 10 includes a frame body 12, a plurality of spacers 13 and a rotation driver 14, wherein the frame body 12 is arranged inside with a containing chamber 121, and each spacer 13 is arranged inside the containing chamber 121 at intervals to form each installation position 11 inside the containing chamber 121. The rotation driver 14 is arranged outside the frame body 12 and can drive the frame body 12 to rotate. In this way, the rotatable frame body 12 with the plurality of installation positions 11 is formed. By rotating the frame body 12, the position of each installation position 11 relative to the document conveyor of the document management device 2 is adjusted, so as to facilitate rapid feeding of the storage module of the document management device 2.

Please refer to Figure 1 and Figure 2, simultaneously. As an optional embodiment of this disclosure, at least two groups of spacers 13 are arranged along the containing chamber 121 to form at least two installation positions 11. Specifically, at least two groups of spacers 13 of the same size can be arranged along the containing chamber 121, thus forming at least two installation positions 11 of the same size, which can accommodate at least two material storage boxes 20 of the same size. In addition, the spacers 13 of this embodiment can also be arranged in different sizes, thus forming at least two installation positions 11 of different sizes, which can accommodate at least two material storage boxes 20 of different sizes. By arranging the plurality of material storage boxes 20, the storage capacity is improved.

Please also refer to Figures 1 to 3. As an optional embodiment of this disclosure, each material storage box 20 is arranged with a storage space for storing documents,

and a bottom of each material storage box is arranged with a plug structure. A plug cavity is arranged along each installation position 11. When each material storage box 20 is inserted into the plug cavity, each material storage box 20 is locked by a positioning locking part which is arranged along each installation position 11. The positioning locking part can use elastic switches. Specifically, each material storage box 20 can adopt a rectangular box, a round or oval box and other shapes. The storage space which is arranged inside the material storage box is distributed with several document storage grooves for storing documents.

Please also refer to Figure 1 to Figure 3. Specifically, the plug structure can adopt a plug pin or a plug block which can be opened on a bottom wall or a side wall of the material storage box 20. The plug cavity is arranged along the corresponding position of the installation position 11, and the plug structure is inserted along a cavity wall of each plug cavity, simultaneously. When inserted in position, each material storage box 20 is locked by the positioning locking part, thus ensuring the stability and reliability of each material storage box 20 which is inserted inside each installation position 11.

Please also refer to Figures 1 to 3. Further, a top of the material storage box 20 is arranged with a rotation handle device 22, which is movably arranged at the top of each material storage box 20. Specifically, the rotation handle device 22 includes a fixed part which is fixed at the top of the material storage box 20 and a handle part that can be opened and closed by rotation relative to the fixed part. When it is necessary to move the material storage box 20, the handle part is rotated to open a certain angle relative to the fixed part. At this time, the staff grabs the material storage box 20 along the handle part to fix the material storage box 20 at the installation position 11 of the material frame 10. When the material storage box 20 is installed in position, the handle part is rotated to abut with the fixed part. This

arrangement improves the convenience and safety of the use of the material storage box 20.

Please also refer to Figures 1 to 3. As another optional embodiment of this disclosure, each material storage box 20 is arranged with a storage space for storing documents. The bottom of each material storage box 20 is arranged with a sliding connection structure. A sliding connection groove is arranged along each installation position 11. Each material storage box 20 is in sliding connection with the sliding connection groove through the sliding connection structure. Simultaneously, when the sliding connection is in position, each material storage box 20 is locked by the positioning locking part which is arranged along each installation position 11, thus ensuring the stability and reliability of each material storage box 20 which is in sliding connection with each installation position 11.

Please also refer to Figure 1 to Figure 3. The top of each material storage box 20 is arranged with the rotation handle device 22, which is movably arranged at the top of each material storage box 20. The structure of the rotation handle device 22 is the same as that of the rotation handle device 22 in Example 1, which is not repeatedly described in detail.

Please also refer to Figures 1 to 3. Further, as an optional embodiment of this disclosure, the in-position detection device 40 is arranged adjacent to the positioning locking part, and includes a photoelectric sensor or a position sensor. When detecting that each material storage box 20 is locked at each installation position 11, the in-position detection device 40 feeds back the detection signal to the control device 30. Then the control device 30 controls each material outlet 21 to open. Specifically, each material outlet 21 is arranged along a side or a bottom of each material storage box 20, and can be arranged in a opposite bipartite distribution, or lateral bipartite distribution. Each material outlet 21 is arranged with an opening-closing driver, such as a drive switch, which is controlled by the

control device 30, so as to control the opening or closing of each material outlet 21. Of course, in other embodiments, a photoelectric switch which is connected with each material outlet 21 and controlled by the control device 30, can also be used to control the opening or closing of each material outlet 21, and no specific restrictions are defined herein.

Please also refer to Figures 1 to 3. As an optional embodiment of this disclosure, the frame body 12 adopts a cylindrical roller structure, and the spacers 13 are uniformly distributed around an axis of the frame body 12 to form the plurality of installation positions 11 which are uniformly distributed along the axis of the frame body 12, and each one material storage box 20 corresponds to each one installation position 11, respectively. Specifically, in this embodiment, seven groups of plate-like spacers 13 are uniformly embedded along a circumference of the frame body 12, and their sizes are the same. Thus, seven groups of rectangular installation positions 11 with the same size are uniformly distributed along the circumference of the frame body 12. The shape and size of the installation positions 11 are compatible with the shape and size of each material storage box 20. Such compact configuration saves production costs and improves the storage capacity of the material frame 10.

Please refer to Figure 4 and Figure 5, simultaneously. In addition, in other embodiments, four groups of conical plate-shaped spacers 13 are uniformly embedded along the axis of the frame body 12, and their sizes are the same. So four groups of rectangular installation positions 11 with the same size are uniformly distributed along the axis of the frame body 12. The shape and size of the installation positions 11 are compatible with the shape and size of each material storage box 20. On the one hand, this arrangement is aesthetical, on the other hand, it is convenient for processing and production, and the storage capacity of the material frame 10 is increased.

Please refer to Figure 6. As another optional embodiment of this disclosure, the frame body 12 can also adopt a rectangular box structure. Each spacer 13 is uniformly distributed around a circumference of the frame body 12 to form the plurality of installation positions 11 which are uniformly distributed along the circumference of the frame body 12. Each one material storage box 20 corresponds to each one installation position 11, respectively. Specifically, in this embodiment, four groups or six groups or eight groups of rectangular plate-shaped spacers 13 are uniformly embedded along the circumference of the frame body 12, and their sizes are the same, so the four groups or six groups or eight groups of rectangular installation positions 11 are uniformly distributed along the circumference of the frame body 12. The shape and size of the installation positions 11 are compatible with the shape and size of each material storage box 20. On the one hand, this arrangement is aesthetical, on the other hand, it is convenient for processing and production, and the storage capacity of the material frame 10 is increased.

Further, as an optional embodiment of this disclosure, the rotation driver 14 comprises a rotation shaft which is arranged outside of the frame body 12 and a rotation motor which is connected with the rotation shaft. Alternatively, the rotation driver 14 includes a rotation base or a rotation block which is arranged outside the frame body 12 and a rotation motor which is connected with the rotation base or rotation block drive, so as to drive the frame body 12 to rotate, adjust the position of each installation position 11 relative to the document conveyor of the document management device 2, thus facilitating the fast feeding of the storage module of the document management device 2.

Please also refer to Figures 4 to 9. The technical solution of this disclosure also relates to a document management device 2, includes at least two document management platforms 50. The document management platform 50 includes a cabinet body 51, the above feeding mechanism 1 which is detachably and rotatablely

arranged under the cabinet body 51, a bidirectional honeycomb storage module 52 which is arranged along both sides of the cabinet body 51 relative to an upper portion of the feeding mechanism 1, at least one group of document conveyor 53 with one end facing the feeding mechanism 1 and the other end facing the bidirectional honeycomb storage module 52, a document acquirement operation module 54 which is arranged at the cabinet body 51, and a document invalidation module 55 which is embedded inside the cabinet body 51. Specifically, the cabinet body 51 is arranged with a frame 511, along which the bidirectional honeycomb storage module 52 and the at least one group of document conveyors 53 corresponding to the feeding mechanism 1 and bidirectional honeycomb storage module 52 are uniformly distributed. Specifically, the feeding mechanism 1 is located under the frame 511, wherein the material outlet 21 of the material storage box 20 of the feeding mechanism 1 is arranged towards the document conveyor 53, which uses a mechanical arm to convey the document of the material outlet 21 to the bidirectional honeycomb storage module 52. In this embodiment, the document management platform 50 is arranged with two groups of document conveyors 53, which are respectively arranged opposite to the feeding mechanism 1 and the bidirectional honeycomb storage module 52, to improve the feeding efficiency. In addition, in this embodiment, the other end of the bidirectional honeycomb storage module 52 is connected with the document acquirement operation module 54, and a document outlet 541 is arranged along the document acquirement operation module 54. Under the function of the document acquirement operation module 54, the document is taken out along the bidirectional honeycomb storage module 52 through the document conveyor 53, and placed at the document outlet 541 which is located at the document acquirement operation module 54. Specifically, the document acquirement operation module 54 also includes a face iris recognition module 542, a thermal printer module 543, a display module 544 and a fingerprint module 545,

which are adjacent to the cabinet body 51. The document outlet 541 is located above the display module 544, and the user can complete face recognition and fingerprint recognition through the face iris recognition module 542 and the fingerprint module 545 according to instructions from the display module 544. The document conveyor 53 conveys the document to document outlet 541, while the user extracts the corresponding business certificate through the thermal printer module 543.

Further, a document invalidation module 55 is arranged along the cabinet body 51, and a document invalidation port 551 is also arranged along the cabinet body 51. The user inserts the old document into the cabinet body 51 along the document invalidation port 551, and completes the document invalidation and recovery through the document invalidation module 55. With this arrangement, the document management device 2 can realize the recovery of old documents. Simultaneously, the storage efficiency is high and the combination of multiple modules improves the work efficiency, saves time and improves the user experience.

Please also refer to Figures 9 to 10. As another optional embodiment of this disclosure, the technical solution of this disclosure also relates to a document management device 2, including a document management platform 50 and a document acquirement operation module 54, which are adjacent to each other. The document management platform 50 includes a cabinet body 51, the above feeding mechanism 1 which is detachably and rotatablely arranged under the cabinet body 51, a honeycomb storage module 56 which is arranged along the cabinet body relative to an upper portion of the feeding mechanism 1, a document conveyor 53 with one end facing the feeding mechanism 1 and the other end facing the honeycomb storage module 56, and a document invalidation module 55 embedded in the cabinet body 51. Specifically, the cabinet body 51 is arranged with a frame 511, along which the honeycomb storage module 56 and the group of document conveyors 53 corresponding to the feeding mechanism 1 and the honeycomb storage

module 56 are uniformly distributed. Specifically, the feeding mechanism 1 is located under the frame 511, wherein the material outlet 21 of the material storage box 20 of the feeding mechanism 1 is arranged towards the document conveyor 53, which uses a mechanical arm to convey the document of the material outlet 21 to the honeycomb storage module 56. In this embodiment, the document management platform 50 is arranged with a group of document conveyors 53, which are respectively arranged opposite to the feeding mechanism 1 and the honeycomb storage module 56, to improve the feeding efficiency. In addition, in this embodiment, the document management platform 50 is connected with the document acquirement operation module 54 through one end of the honeycomb storage module 56, and a document outlet 541 is arranged along the document acquirement operation module 54. Under the function of the document acquirement operation module 54, the document is taken out along the honeycomb storage module 56 through the document conveyor 53 and placed at the document outlet 541 which is located at the document acquirement operation module 54. Specifically, the document acquirement operation module 54 also includes a face iris recognition module 542, a display module 544, a fingerprint module 545 and a document reader 546, which are adjacent to the cabinet body 51. Under the instruction of the display module 544, the user can complete face recognition and fingerprint recognition through the face iris recognition module 542 and the fingerprint module 545, and then the document conveyor 53 conveys the document along to the document outlet 541.

Further, a document invalidation module 55 is arranged along the cabinet body 51, and a document invalidation port 551 is also arranged along the cabinet body 51. The user inserts the old document into the cabinet body 51 along the document invalidation port 551, and completes the document invalidation and recovery through the document invalidation module 55. With this arrangement, the document

management device 2 can realize the recovery of old documents. Simultaneously, the storage efficiency is high and the combination of multiple modules improves the work efficiency, saves time and improves the user experience.

The above is only an optional embodiment of this disclosure, and does not limit the protection scope of this disclosure. Under the creative concept of this disclosure, the equivalent structure transformation made by using the description and attached drawings of this disclosure, or the direct/indirect application in other relevant technical fields, are included in the protection scope of this disclosure.

CLAIMS

1. A feeding mechanism, comprising:

a material frame, which is uniformly distributed with a plurality of installation positions;

a plurality of material storage boxes, each of which is detachably installed inside each of the installation positions and has at least one material outlet;

a control device, which is arranged in the material storage box; and

an in-position detection device, which is arranged inside each installation position and communicated with the control device;

wherein, when detecting that each material storage box is installed in position along the installation position, the in-position detection device feeds back a detection signal to the control device, and the control device controls each material outlet to open.

2. The feeding mechanism according to claim 1, wherein the material frame comprises:

a frame body, which is arranged inside with a containing chamber;

a plurality of spacers, which are arranged inside the containing chamber at intervals to form each of the installation positions inside the containing chamber;

a rotation driver, which is arranged outside the frame body and drives the frame body to rotate.

3. The feeding mechanism according to claim 2, wherein at least two groups of the spacers are arranged along the containing chamber for spacing the containing chamber to form at least two installation positions.

4. The feeding mechanism according to claim 3, wherein each material storage box is arranged with a storage space for storing a document, and a bottom of each material storage box is arranged with a plug structure, wherein a plug cavity is

correspondingly arranged along each installation position, when each material storage box is inserted into the plug cavity, each material storage box is locked by a positioning locking part which is arranged along each installation position, wherein the positioning locking part is an elastic switch; a top of each material storage box is arranged with a rotation handle device, which is movably arranged at the top of each material storage box.

5. The feeding mechanism according to claim 3, wherein each material storage box is arranged with a storage space for storing a document, and a bottom of each material storage box is arranged with a sliding connection structure, wherein a sliding connection groove is correspondingly arranged along each installation position, when each material storage box is in sliding connection with the sliding connection groove, each material storage box is locked by a positioning locking part which is arranged along each installation position, wherein the positioning locking part is an elastic switch; a top of each material storage box is arranged with a rotation handle device, which is movably arranged at the top of each material storage box.

6. The feeding mechanism according to claim 4 or 5, wherein the in-position detection device is arranged adjacent to the positioning locking part, and comprises a photoelectric sensor or a position sensor, wherein after detecting that each material storage box is locked at each installation position, the in-position detection device feeds back the detection signal to the control device, and the control device controls the each material outlet to open.

7. The feeding mechanism according to claim 3, wherein the frame body has a cylindrical roller structure, and the spacers are uniformly distributed around an axis of the frame body to form the plurality of installation positions which are uniformly distributed along the axis of the frame body, and each one material storage box corresponds to each one installation position.

8. The feeding mechanism according to claim 3, wherein the frame body has a rectangular box structure, and the spacers are uniformly distributed around a circumference of the frame body to form the plurality of installation positions which are uniformly distributed along the circumference of the frame body, and each one material storage box corresponds to each one installation position.

9. A document management device, comprising at least two document management platforms which are jointed together;

wherein the document management platform comprises:

a cabinet body;

the feeding mechanism according to any one of claims 1-8, wherein the feeding mechanism is detachably and rotatablely arranged under the cabinet body;

a bidirectional honeycomb storage module, which is arranged along both sides of the cabinet body relative to an upper portion of the feeding mechanism;

at least one group of document conveyor with one end facing the feeding mechanism and the other end facing the bidirectional honeycomb storage module;

a document acquirement operation module which is arranged at the cabinet body; and

a document invalidation module, which is embedded inside the cabinet body.

10. A document management device, comprising a document management platform and a document acquirement operation module which are arranged adjacent to each other; wherein the document management platform comprises:

a cabinet body;

the feeding mechanism according to any one of claims 1-8, wherein the feeding mechanism is detachably and rotatablely arranged under the cabinet body;

a honeycomb storage module, which is arranged along the cabinet body relative to an upper portion of the feeding mechanism;

a document conveyor with one end facing the feeding mechanism and the other end facing the bidirectional honeycomb storage module; and

a document invalidation module, which is embedded inside the cabinet body.