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(54) **APPARATUS OF WITHDRAWING CASH FROM CASH TRANSACTION MACHINE**

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(57) **ABSTRACT**

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Provided is a withdrawal apparatus of a cash transaction machine, including: a storage means for storing paper media; a stack means for stacking the paper media transferred from the storage means; a withdrawal means for providing a stack of the paper media transferred from the stack means to a customer; a first transfer means transferring the paper media from the storage means to the stack means; a second transfer means for transferring the stack of the paper media from the stack means to the withdrawal means, which is separated from the first transfer means; and a stack transfer means for transferring the stack of the paper media in the stack means to a pathway defined by the second transfer means. The pathways defined respectively by the first and second transfer units are separately divided, thereby rapidly transferring the paper media and distinguishing the structure for transferring the paper media from the structure for transferring the stack of the paper media in order to prevent a trouble of the apparatus.

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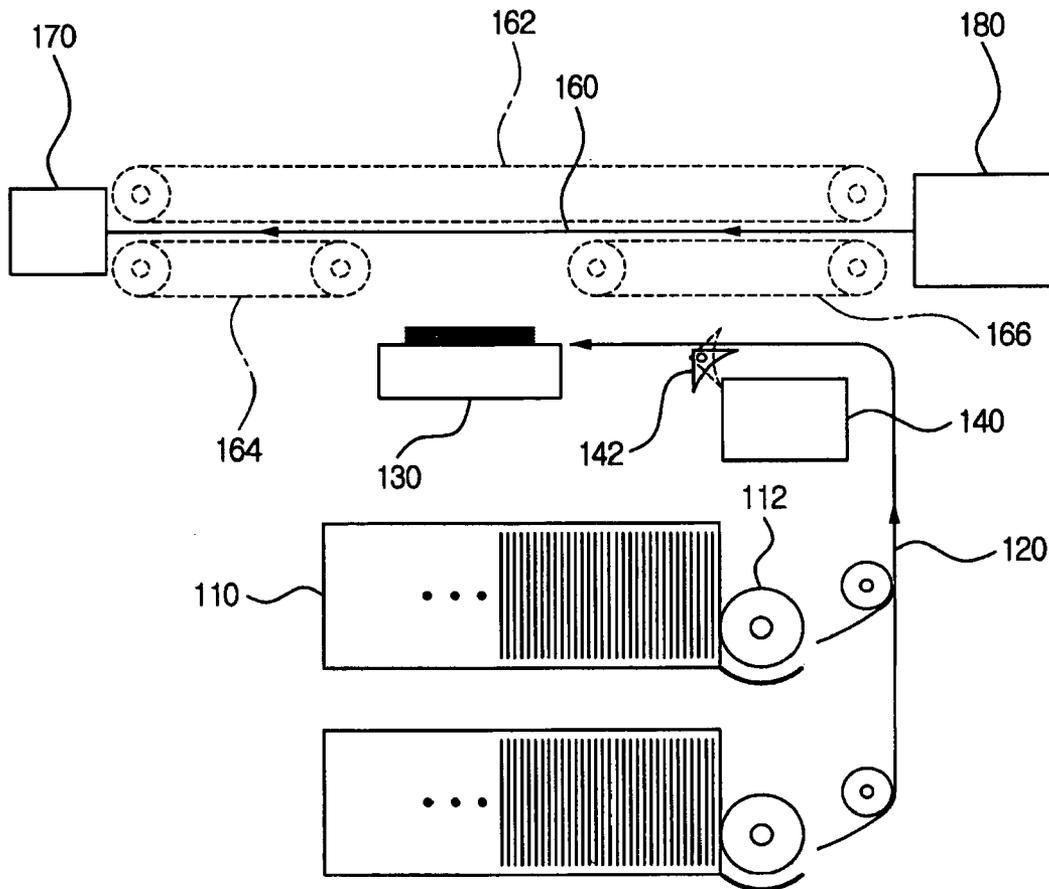
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**100**



**FIG. 1**

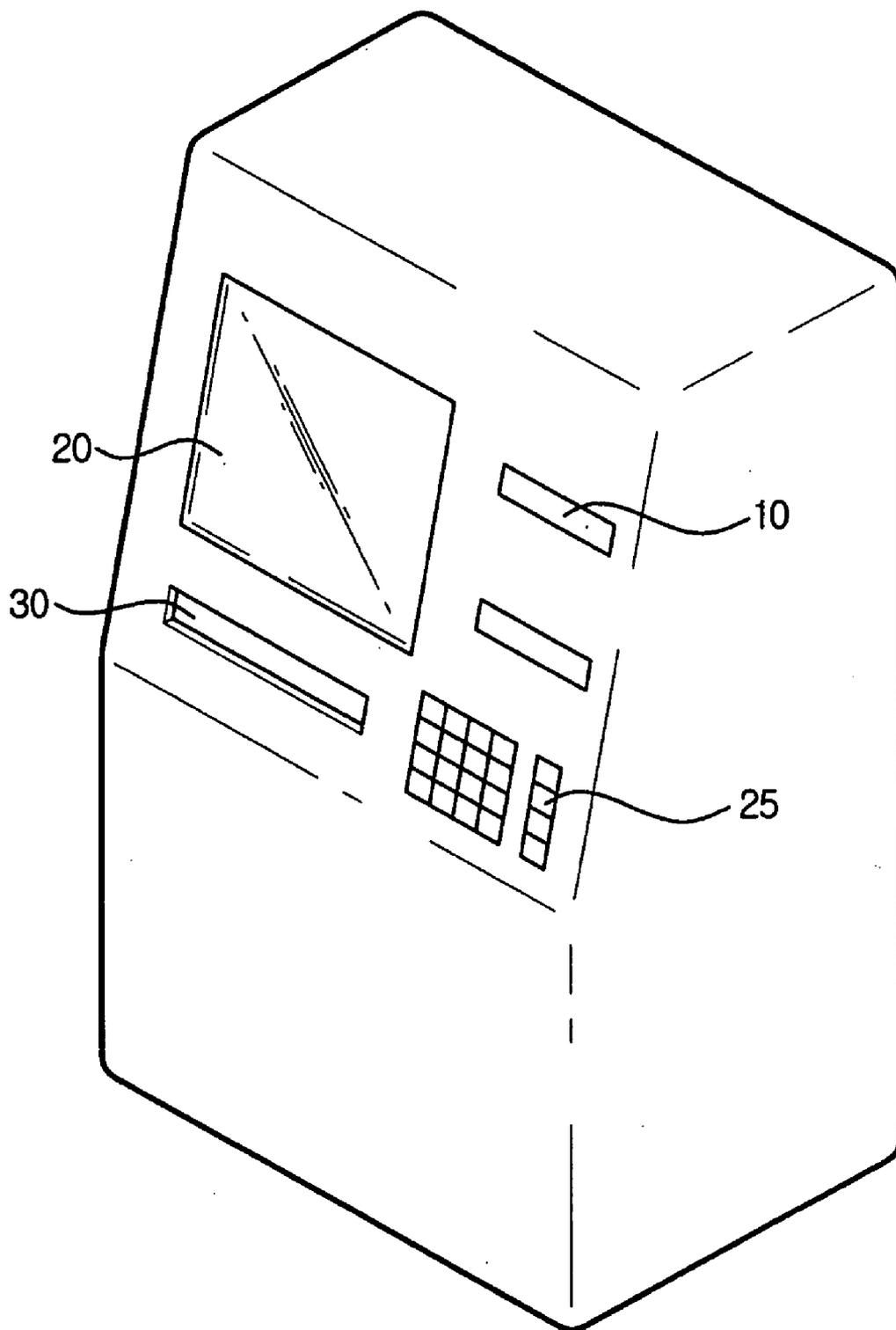


FIG. 2

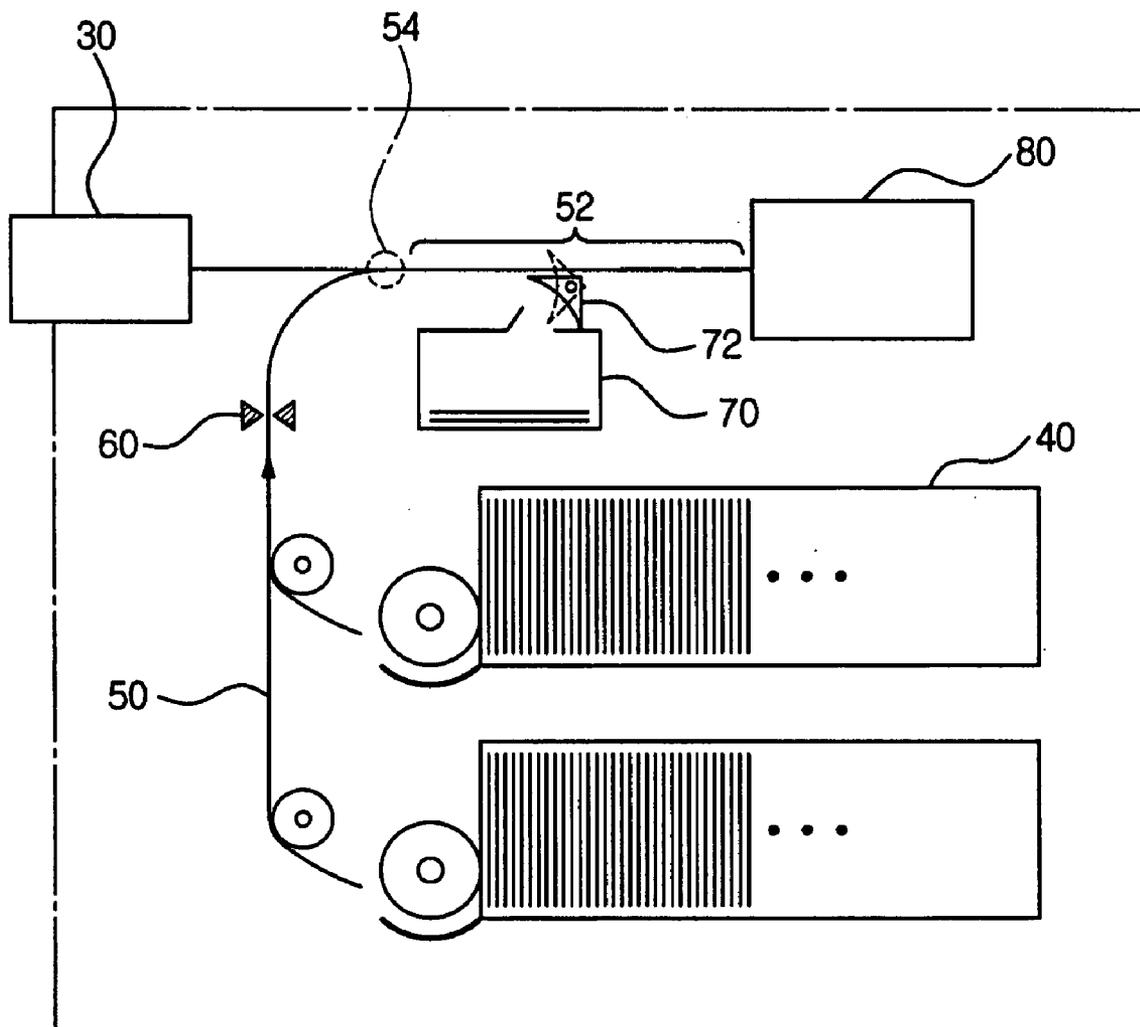


FIG. 3

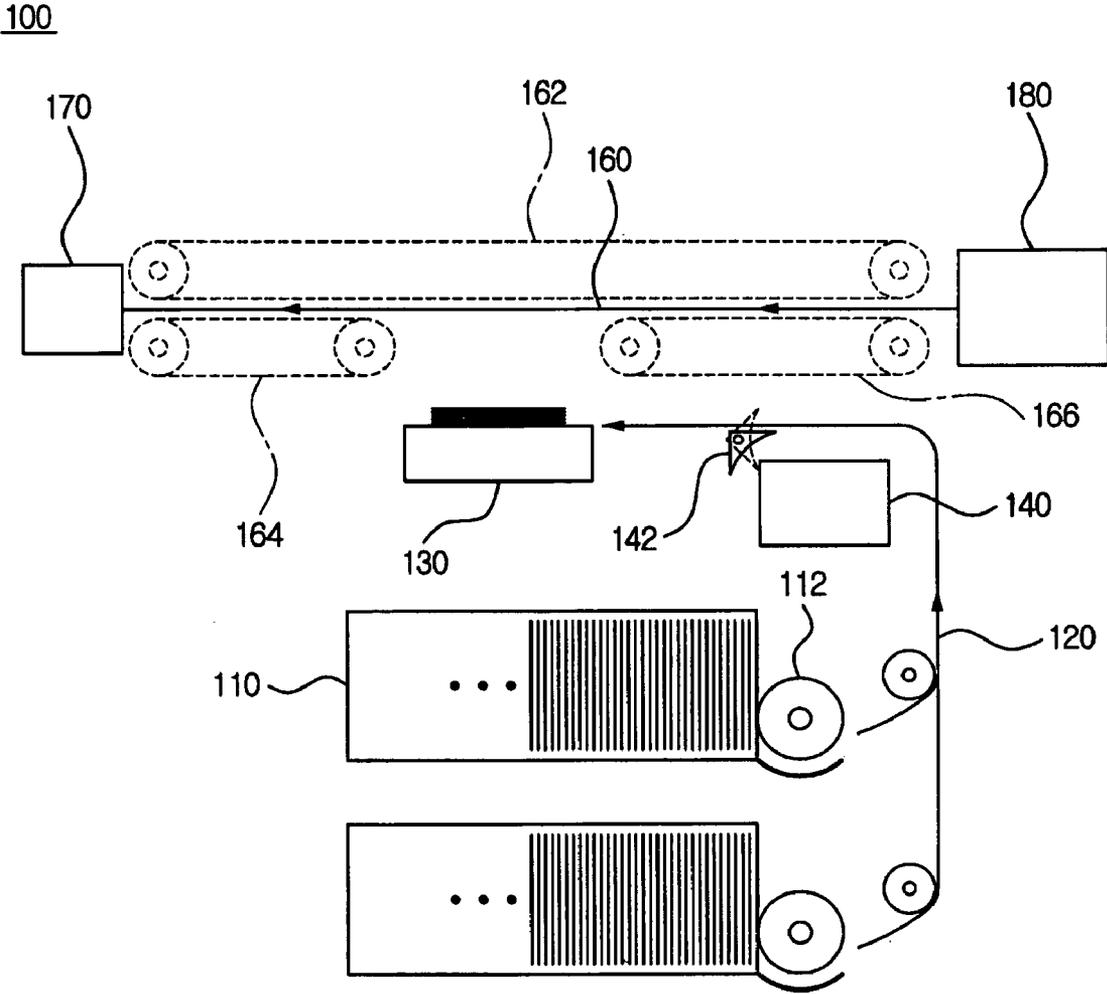


FIG. 4

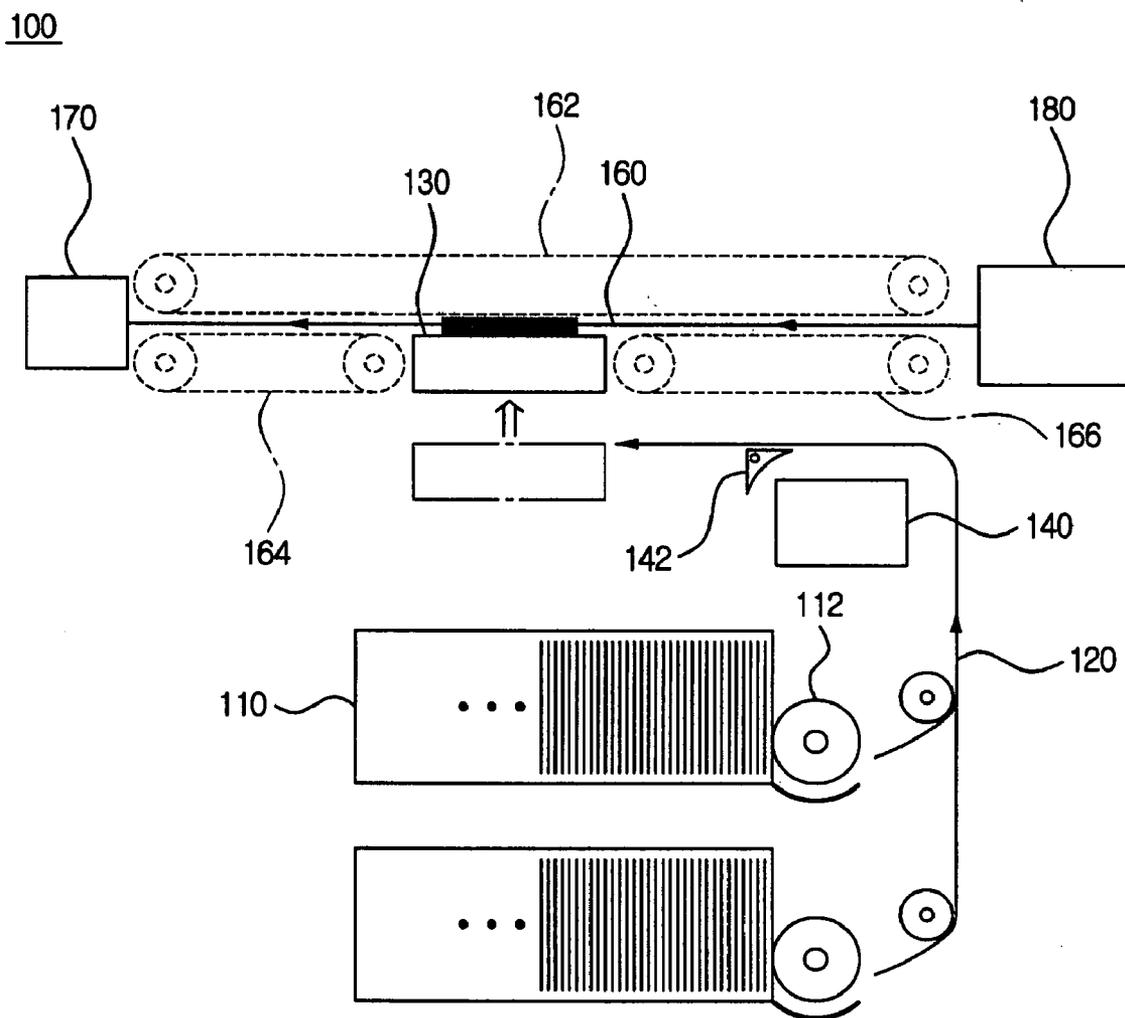


FIG. 5

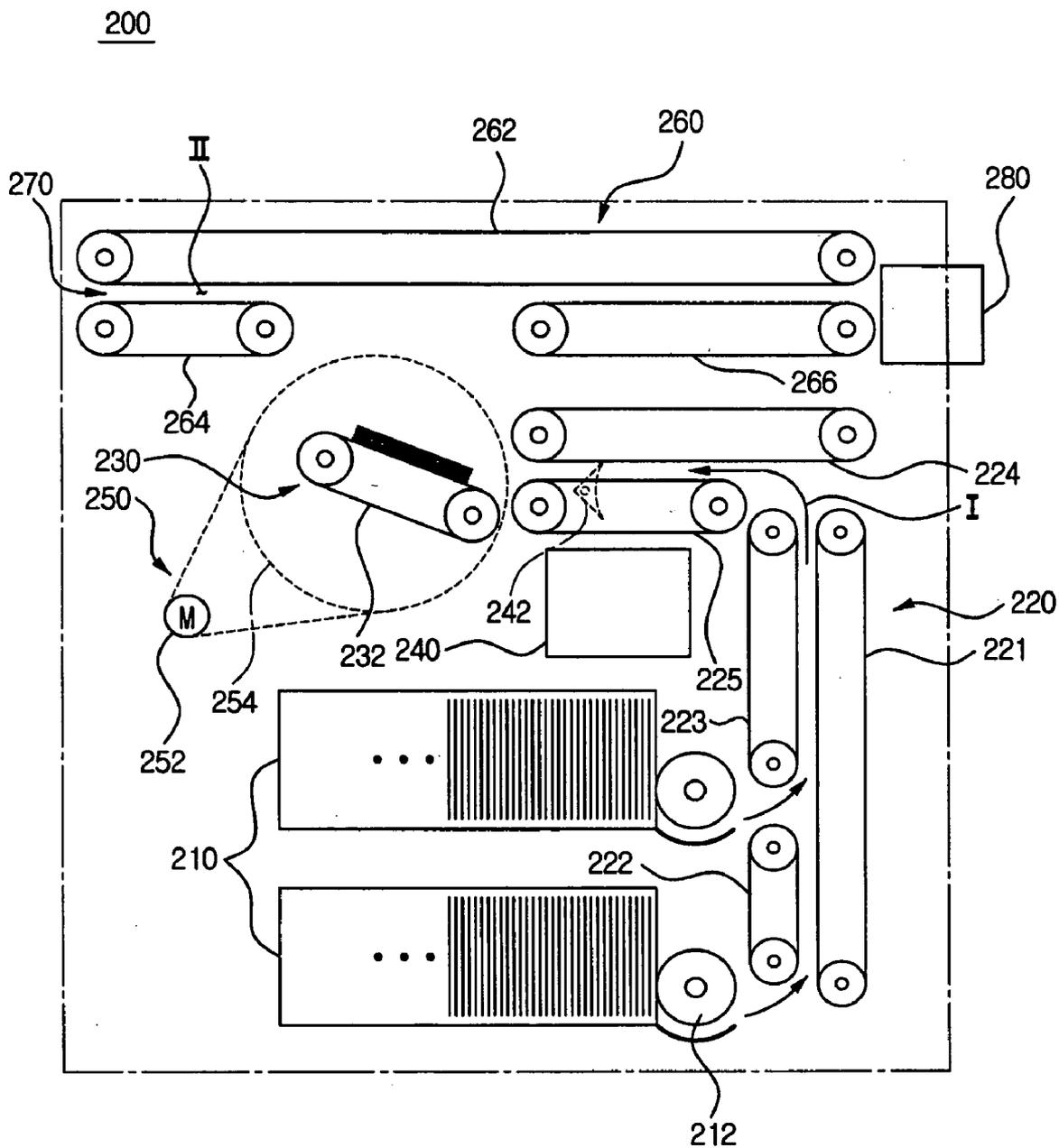


FIG. 6

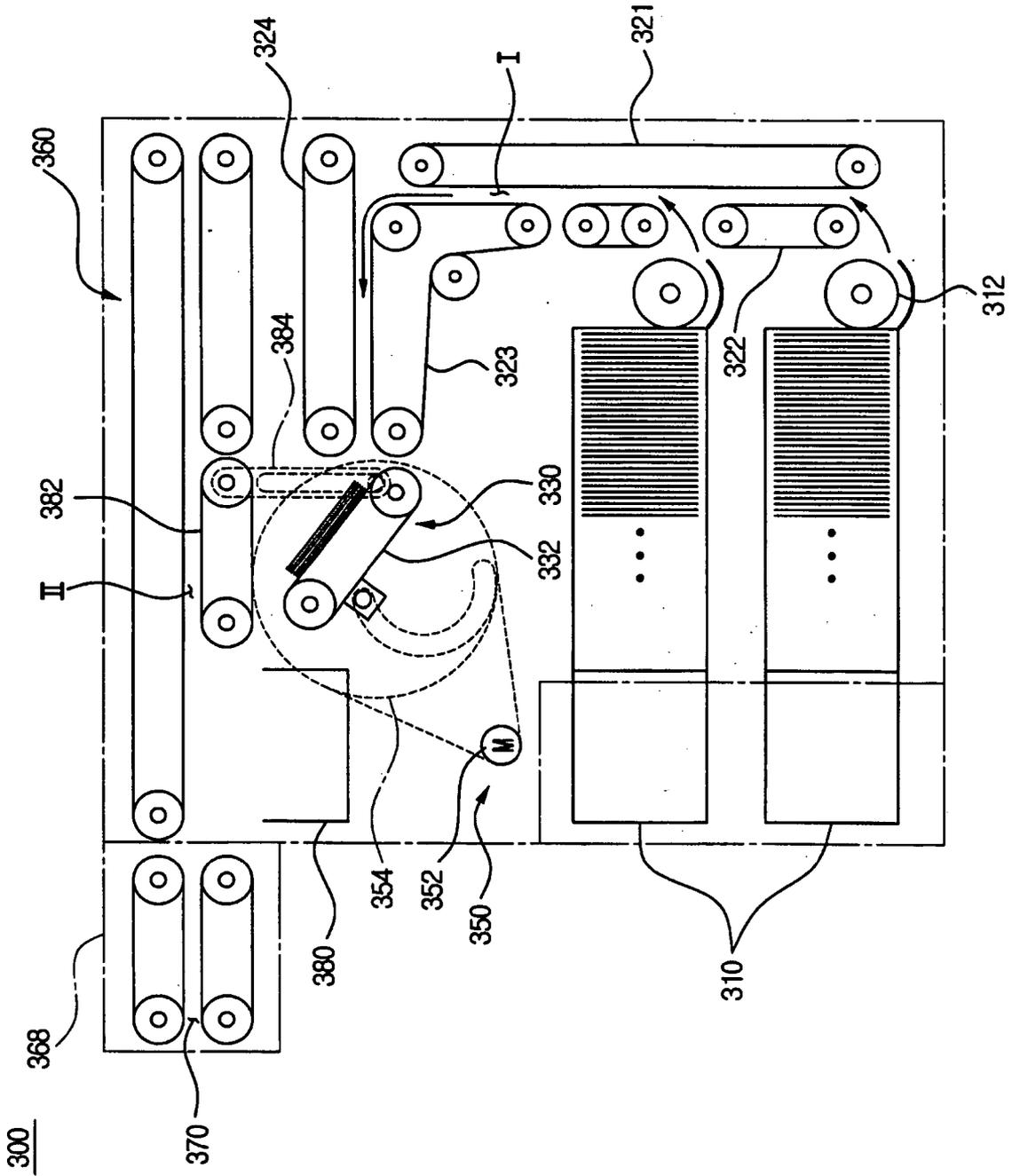


FIG. 7

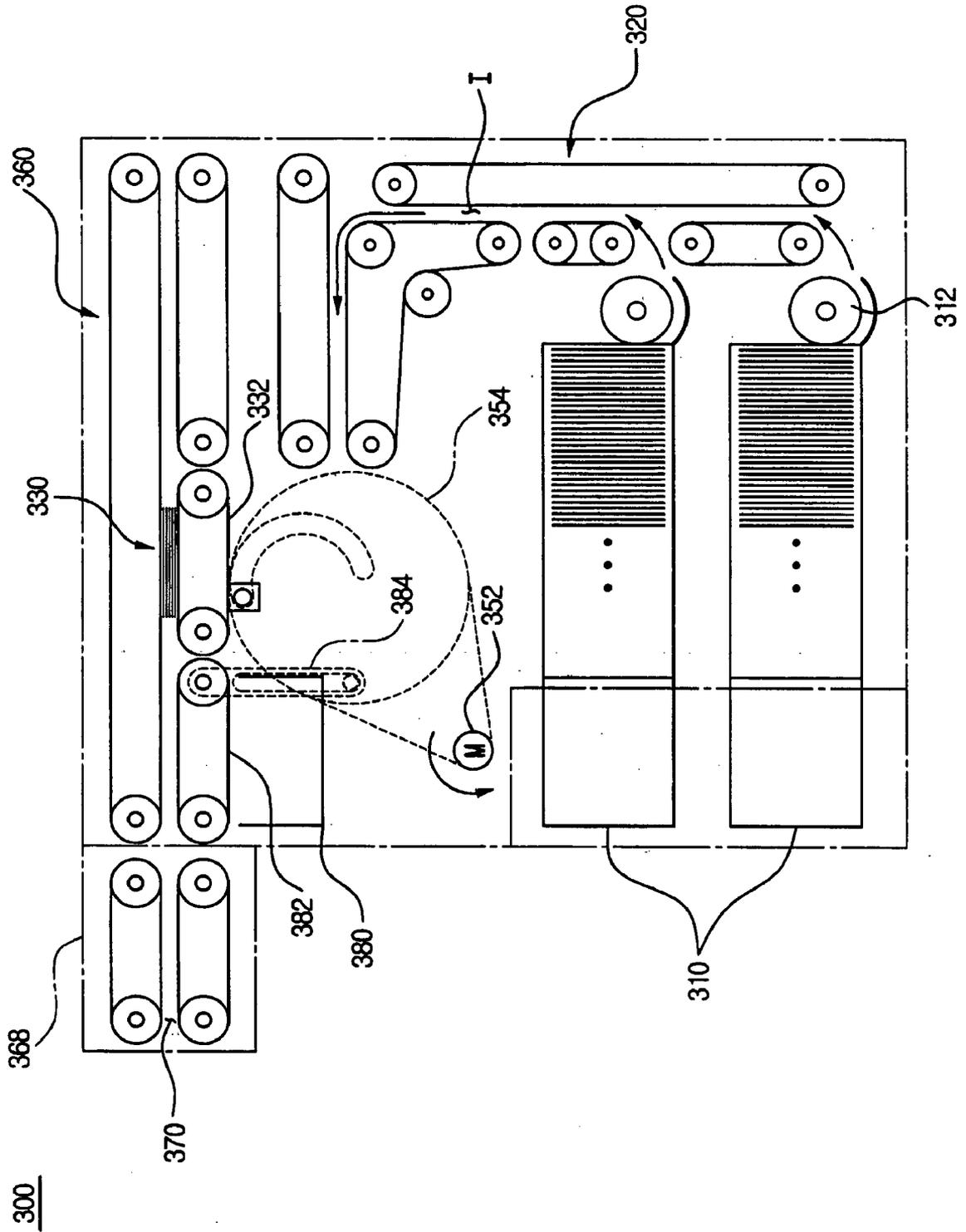
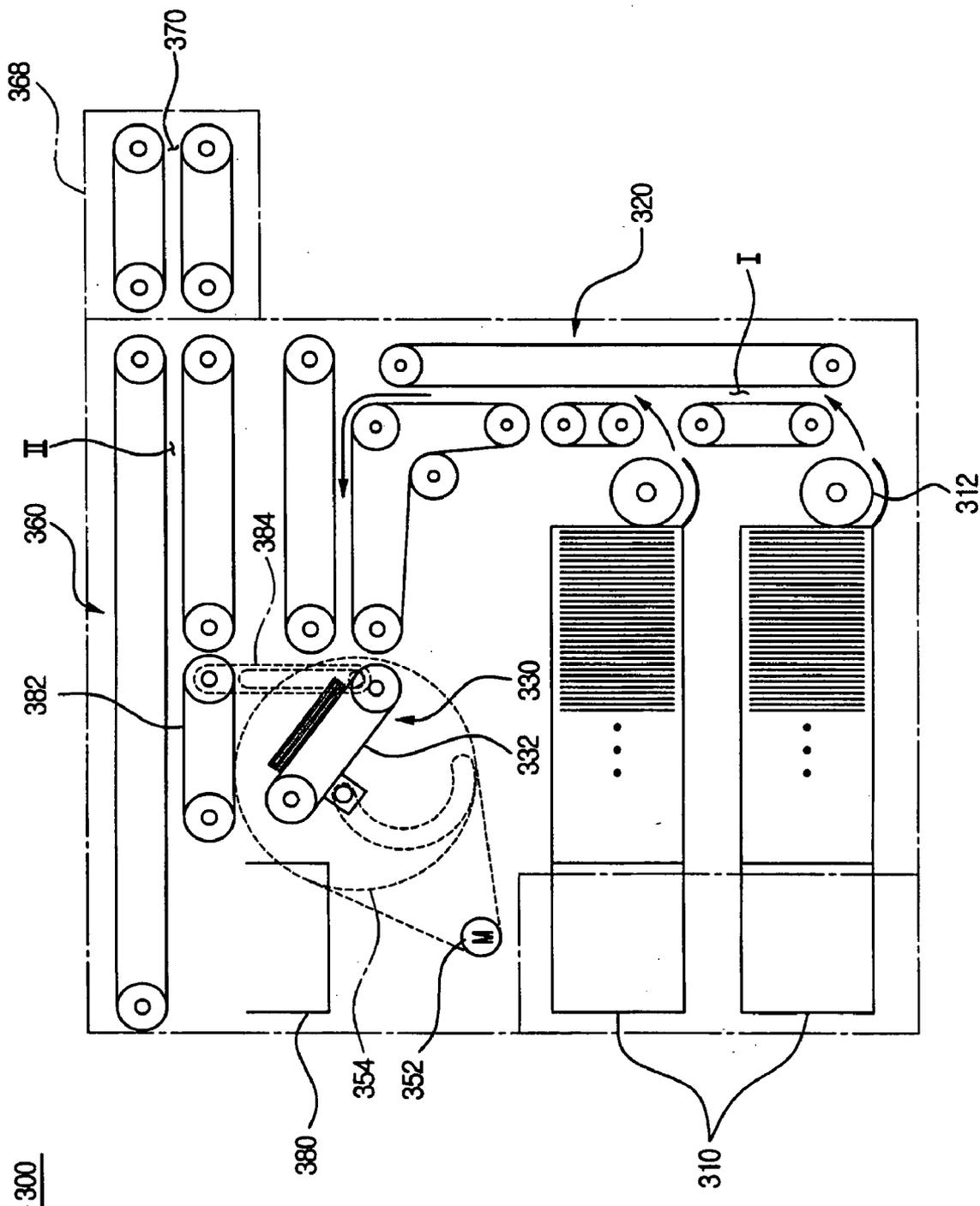


FIG. 8



## APPARATUS OF WITHDRAWING CASH FROM CASH TRANSACTION MACHINE

### CROSS REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of Korean Patent Application No. 2005-34935, filed on Apr. 27, 2005, in the Korean Intellectual Property Office, the disclosure of which is incorporated herein in its entirety by reference.

### BACKGROUND OF THE INVENTION

#### [0002] 1. Field of the Invention

[0003] The present invention relates to a cash transaction machine, and more particularly, relates to a withdrawal apparatus which can rapidly withdrawing paper media such as notes, checks, gift certificates, and tickets from a cash transaction machine.

#### [0004] 2. Description of the Related Art

[0005] A cash transaction machine is an automation apparatus which can support a basic banking service such as depositing or withdrawing cash without a bank staff, regardless of place or time, with respect of financial service. The cash transaction machine may be divided into a cash dispenser (CD) and an automated teller machine (ATM) according to whether it has a depositing function or not. The cash transaction machine may be used for not only handling cashes but also handling checks, printing bankbooks, and selling tickets.

[0006] Now, the number of the cash transaction machines installed in banks or other financial agency is gradually increased. Gradually, customers frequently use the cash transaction machine because the cash transaction machines become convenient. As increase of frequency of using the cash transaction machine, the amount of each banking transaction is increased together. According to the increase of the amount dealt via the cash transaction machine, a lot of notes are paid into or withdrawn. According to using the lot of notes, there are frequently generated unexpected matters due to movement or position interference between notes.

[0007] FIG. 1 is a perspective view of a conventional cash transaction machine.

[0008] Referring to FIG. 1, a cash transaction machine is an apparatus for depositing or withdrawing cashes or checks, in which several modules divided into function units, such as a magnetic card reading module, a bankbook arrangement module, a user interface module, and a note deposit/withdrawal module, are installed in a housing.

[0009] The magnetic card reading module is exposed outside via a card insertion part 10, and the user interface module is exposed outside via a display screen 20 or a key input part 25.

[0010] The withdrawal module is exposed outside via a cash discharge part 30. The cash discharge part 30 is a direct discharge type, in which previously requested amount of cash is prepared in the withdrawal module and the cash is presented as a stack from the cash discharge part 30. However, since a cash cassette storing cash provides cash one by one, a procedure of temporarily loading the cash is

required in order to provide the cash as the stack in the withdrawal module. For this, the withdrawal module may include a temporary stack part.

[0011] FIG. 2 is a configuration diagram illustrating a temporary stack part of a conventional withdrawal module.

[0012] Referring to FIG. 2, a conventional withdrawal module includes a cash cassette 40, a transfer unit 50, a cash detection sensor 60, a rejecting part 70, and a temporary stack part. Cash is discharged from the cash cassette 40, transferred along the transfer unit 50, loaded to a predetermined amount in the temporary stack part, and transferred to a withdrawal part 30.

[0013] The cash is withdrawn from the cash cassette 40 one by one and transferred to the temporary stack part 80 along the transfer unit 50. In transferring to the temporary stack part 80, the cash passes through the cash detection sensor 60 and the cash detection sensor 60 may detect double sheets, spoiled note, denomination, or counterfeit note. In case that a passing medium can not be normally transacted, a diverting portion 72 operates to convert the pathway of the cash and the converted cash is stored in the rejecting part 70 instead of the temporary stack part 80.

[0014] When cash of the amount request by a customer is loaded in the temporary stack part 80, the transfer unit 50 may reversely operate to transfer the cash loaded in the temporary stack part 80 to the withdrawal part 30 at a time, thereby the customer can receive the cash discharged from the withdrawal part 30.

[0015] However, in the conventional withdrawal module, the transfer unit 50 operates two rotations contrary to each other. Namely, the transfer unit 50 rotates transfer belts or rollers in one direction when transferring the cash to the temporary stack part 80, while it rotates the same belts or rollers in opposite direction when discharging the cash therefrom 80. Thus, paper jams may frequently occur at the common transfer belts or rollers. For example, as illustrated in FIG. 2, cash may be remained in a part of the transfer unit 50 adjacent to the temporary stack part 80. In case that a cash stack in the temporary stack part 80 is transferred for withdrawal, the residual cash remaining in the transfer unit 50 may prevent the progress of the cash stack to generate a jam. Though a jam is not generated, the residual cash may be discharged with a cash stack of a next transaction. Also, the discharged cash stack may be prevented at a crossing 54 of the transfer unit 50 from progressing, and a jam may be frequently generated by a small interference at the crossing 54 in the transfer unit 50.

### SUMMARY OF THE INVENTION

[0016] The present invention provides a withdrawal apparatus that can safely transfer paper media such as cash in a cash transaction machine without a jam.

[0017] The present invention also provides a withdrawal apparatus that can simply keep operation mechanism by keeping a simple pathway of paper media.

[0018] According to an aspect of the present invention, a withdrawal apparatus of a cash transaction machine includes a first transfer means and a second transfer means mutually separated, and pathway defined respectively by the first and second transfer means are departed from each other at a

predetermined interval to be physically separated. Only, a stack means may function as a temporary stack part or a part of the transfer pathway of the second transfer means by moving between the first transfer means and the second transfer means. For example, the stack means may be located at an end portion of the first transfer means and receive paper media one by one from a storage means. When the paper media of a requested amount are loaded, the stack means may move to the second transfer means and locate a stack of paper media on the pathway of the second transfer means. Then, the second transfer means may start to operate and transfer the stack of the paper media to a withdrawal part.

[0019] The pathway defined by the first and second transfer means are separated from each other. Accordingly, the first transfer means only transfers the paper media to the stack means and progresses in one direction, thereby preventing jam generating. The second transfer means transfers the stack of the paper media transferred by the stack means to the withdrawal part and generally progresses in one direction, too. That is, the first and second transfer means are physically separated from each other, such that they simply and stably operate without making interference with each other.

[0020] Also, the first and second transfer means are separated, thereby easily converting the withdrawal apparatus into a front insertion type or a rear insertion type. Generally, a cassette is used for storing and inserting the paper media. In the front insertion type, the position of inserting the cassette is the same as the direction of the withdrawal part. In case that the front surface of a cash transaction machine is opened and closed, a withdrawal apparatus of the front insertion type is used. In the rear insertion type, the position of inserting the cassette is opposite to the direction of the withdrawal part. In case that the rear surface of a cash transaction machine is opened and closed, a withdrawal apparatus of the rear insertion type is used. In the withdrawal apparatus according to the present invention, the position of inserting the cassette is fixed, the position of the withdrawal part may be changed by switching the rotation direction of the second transfer means. The change is possible because the first transfer means is separated from the second transfer means. The procedure of switching may be simply performed.

[0021] In this case, the withdrawal apparatus includes the function of withdrawal, and both of a module for only withdrawing and a module for deposit/withdrawal may be understood as the withdrawal apparatus. Also, the paper media transacted by the withdrawal apparatus are articles in a shape of a sheet, which has a certain value, such as notes, checks, gift certificates, and tickets. The paper media may be formed of a material that may be substitute for paper, such as a plastic thin film, in addition to paper.

BRIEF DESCRIPTION OF THE DRAWINGS

[0022] The above and other features and advantages of the present invention will become more apparent by describing in detail exemplary embodiments thereof with reference to the attached drawings in which:

[0023] FIG. 1 is a perspective view of a conventional cash transaction machine;

[0024] FIG. 2 is a configuration diagram illustrating a temporary stack part in a conventional withdrawal module;

[0025] FIG. 3 is a configuration diagram illustrating a withdrawal apparatus of a cash transaction machine according to one embodiment of the present invention;

[0026] FIG. 4 is a configuration diagram illustrating operation mechanism of the withdrawal of FIG. 3;

[0027] FIG. 5 is a configuration diagram illustrating a withdrawal apparatus of a cash transaction machine according to one embodiment of the present invention;

[0028] FIG. 6 is a configuration diagram illustrating a withdrawal apparatus of a cash transaction machine according to one embodiment of the present invention;

[0029] FIG. 7 is a configuration diagram illustrating operation mechanism of the withdrawal apparatus of FIG. 6; and

[0030] FIG. 8 is a configuration diagram illustrating the withdrawal apparatus of FIG. 6.

DETAILED DESCRIPTION OF THE PRESENT INVENTION

[0031] Hereinafter, the present invention will be described in detail by explaining preferred embodiments of the invention with reference to the attached drawings. However, the present invention is not restricted or defined by the embodiments.

[0032] FIG. 3 is a configuration diagram illustrating a withdrawal apparatus of a cash transaction machine according to one embodiment of the present invention, and FIG. 4 is a configuration diagram illustrating operation mechanism of the withdrawal of FIG. 3.

[0033] Referring to FIG. 3, a withdrawal apparatus 100 according to the present embodiment includes a cash cassette 110, a first transfer unit 120, a temporary stack part 130, a second transfer unit 160, and a withdrawal part 170. The withdrawal apparatus 100 includes two cash cassettes 110. One of the two cash cassettes is selected and cash may be withdrawn as required. The cash withdrawn one by one from the cash cassette 110 is transferred the first transfer unit 120 and loaded one by one in the temporary stack part 130. When a predetermined amount of the cash is loaded in the temporary stack part 130, the temporary stack part 130 is moved to the second transfer unit 160 and the cash stack may be located on a transfer pathway defined by the second transfer unit and transferred to the withdrawal part 170.

[0034] One or more than two cash cassettes 110 are installed into the withdrawal apparatus 100, and the loaded cash may be discharged in response to the rotation of a pickup roller 112. The cash discharged from the cash cassette 110 is transferred to the temporary stack part 130 by the first transfer unit 120. In case that the cash is determined as a double sheet or a counterfeit note, the cash may not be transferred to the temporary stack part 130 and separately stored in a first rejecting box 140. In this case, a diverting portion 142 is disposed adjacent to the first rejecting box 140 and may be rotated by a drive unit such as a solenoid and switch the transfer pathway of the cash.

[0035] The cash transferred from the cash cassette 10 is loaded one by one on a stack supporter of the temporary

stack part 130. When a predetermined amount of the cash is loaded, transferring the cash by the first transfer unit 120 may be stopped and the temporary stack part 130 supporting the cash stack is transferred to the second transfer unit 160 by a stack transfer element (not shown).

[0036] Referring to FIG. 4, the temporary stack part 130 is moved such that the top surface of the stack supporter is located on the transfer pathway of the second transfer unit 160 and may be a part of the transfer pathway defined by the second transfer unit 160.

[0037] After the temporary stack part 130 is transferred to the second transfer unit 160, the second transfer unit 160 starts to operate and transfers the cash stack in the temporary stack part 130 to the withdrawal part 170. The cash is transferred in a stack in the second transfer unit 160. The cash stack is maintained in a state of partially being held by the second transfer unit 160 in the withdrawal part 170. When the cash stack is discharged from the withdrawal part 170, a customer may receive a requested amount of cash. As illustrated in a dotted line, the second transfer unit 160 may include second transfer belts 162 through 166 vertically disposed by interposing the transfer pathway therebetween. The temporary stack part 130 may enter between the second transfer belts 164 and 166 because the second transfer belts 164 and 166 are departed from each other as the length of the temporary stack part 130.

[0038] If a customer does not take the cash from the withdrawal part 170, the second transfer unit 160 may reversely operate to reject the not received cash. Actually, the cash stack may be maintained in the state of being held in the withdrawal part 170 for a predetermined limit time, and the second transfer unit 160 may reversely operate to collect the not received cash to a second rejecting box 180 after the limit time, e.g. about 20-30 seconds.

[0039] As described by explaining FIGS. 3 and 4, the respective pathways defined by the first and second transfer units 120 and 160 are separated, such that the first and the second transfer unit 120 and 160 may independently operate. Accordingly, the first transfer unit 120 transfers the cash from the cash cassette 110 to the temporary stack part 130 one after another and does not reversely moves in general. Also, the second transfer unit 160 transfers the cash transferred to the transfer pathway by the temporary stack part 130 in a stack and may operate regardless of the first transfer unit 120. The second transfer unit 160 may reversely move in order to reject the not received cash or the cash remaining in the second transfer unit 160, which is an exceptional case.

[0040] FIG. 5 is a configuration diagram illustrating a withdrawal apparatus of a cash transaction machine according to one embodiment of the present invention.

[0041] Referring to FIG. 5, a withdrawal apparatus 200 according to the present embodiment includes a cash cassette 210, a first transfer unit 220, a temporary stack part 230, a first rejecting box 240, a stack transfer element 250, a second transfer unit 260, a withdrawal part 270, and a second rejecting box 280. The withdrawal apparatus 200 may select one of the two cash cassettes 210 in order to withdraw cash. Cash withdrawn one by one from the cash cassette 210 is transferred by the first transfer unit 220 and loaded in the temporary stack part 230 in a sheet. When a predetermined amount of the cash is loaded in the temporary

stack part 230, the temporary stack part 230 is transferred to the second transfer unit 260 by the stack transfer element 250 and the cash stack may be located on a transfer pathway defined by the second transfer unit 260 and transferred to the withdrawal part 270.

[0042] One or more than two cash cassettes are inserted into the withdrawal apparatus 200, and the loaded cash may be discharged one by one in response to the rotation of a pickup roller 212. The cash discharged from the cash cassette 210 is moved to the temporary stack part 230 by the first transfer unit 220. The first transfer unit 220 includes a plurality of first transfer belts 221 through 225 for transferring the cash. The first transfer belts 221 through 225 are disposed facing each other in order to provide a first pathway I. Accordingly, the cash withdrawn in a sheet is moved along the first pathway I provided between the first transfer belts 221 through 225 and transferred to the temporary stack part 230.

[0043] In transferring the cash from the cash cassette 210 to the temporary stack part 230, the cash is passed through a cash detection sensor and the withdrawal apparatus 200 may investigate whether the cash is a double sheet, a counterfeit note, and a genuine note for each sort. In case that the cash is determined to be a double sheet or a counterfeit note, the cash is not transferred to the temporary stack part 230 and may be separately stored in the first rejecting box 240. In this case, a diverting portion 242 is installed adjacent to the first rejecting box 240 and may be rotated by a drive unit such as a solenoid and switch the transfer pathway of the cash.

[0044] The cash transferred from the cash cassette 210 is loaded on a stack supporter of the temporary stack part 230. When a predetermined amount of the cash is loaded, the first transfer unit 220 may stop transferring the cash. The temporary stack part 230 includes a stack transfer belt 232, and the cash transferred from the first transfer unit 220 is located on the stack transfer belt 232. The temporary stack part 230 supporting the cash stack is transferred to the second transfer unit 260 by the stack transfer element 250.

[0045] The stack transfer element 250 includes a stack driving part 252 and a stack elevation part 254. The stack driving part 252 has an electric motor running by electricity. The rotating direction and angle can be controlled according to the property of current. The stack elevation part 254 can transfer the temporary stack part 230 from the first transfer unit 230 to the second transfer unit 260 utilizing the stack driving part 252 as a power source. The stack elevation unit 254 is connected to the temporary stack part 230 to be coupled with the temporary stack part 230 such that the temporary stack part 230 can move along a regular pathway. For this, a belt or a cylinder may be used as the stack elevation part 254. As illustrated, the rotation of the stack driving part 252 may be easily converted into the round-trip movement of the temporary stack part 230 by using a rotation element having a cam surface.

[0046] The temporary stack part 230 is moved such that the top surface of the stack supporter is located on a transfer pathway of the second transfer unit 260, the top surface of the stack transfer belt 232 is located to be approximately identical with a second pathway II. Rollers and a shaft are located at both ends of the temporary stack part 230 and the stack transfer belt 232 circulates via the rollers. The rollers

and shafts are operatively connected to a driving part (not shown) of the second transfer unit 260, such that the stack transfer belt 232 may operate together with the working of the second transfer unit 260 along the second pathway II.

[0047] After the temporary stack part 230 is transferred to the second transfer unit 260, the second transfer unit 260 starts to operate and transfer the cash stack in the temporary stack part 230 to the withdrawal part 270. The cash is transferred by the second transfer unit 260 in a stack and is maintained in a state of partially being held by the second transfer unit 260. When the cash stack is discharged from the withdrawal part 270, a customer may receive a requested amount of the cash. The second transfer unit 260 includes second transfer belts 262 through 266 vertically disposed interposing the second pathway II therebetween. The temporary stack part 230 may enter between the second transfer belts 264 and 266 because the second transfer belts 264 and 266 are departed from each other as about the length of the temporary stack part 230.

[0048] If a customer does not take the cash from the withdrawal part 270, the second transfer unit 260 may reversely operate and collect the not received cash. Actually, the cash stack may be maintained in the state of being held in the withdrawal part 270 for a predetermined limit time, and the second transfer unit 260 may reversely operate to collect the not received cash to a second rejecting box 280 after the limit time.

[0049] FIG. 6 is a configuration diagram illustrating a withdrawal apparatus of a cash transaction machine according to one embodiment of the present invention, and FIG. 7 is a configuration diagram illustrating operation mechanism of the withdrawal apparatus of FIG. 6.

[0050] Referring to FIG. 6, a withdrawal apparatus 300 according to the present embodiment includes a cash cassette 310, a first transfer unit 320, a temporary stack part 330, a first rejecting box 340, a stack transfer element 350, a second transfer unit 360, a withdrawal part 370, and a second rejecting box 380. The withdrawal apparatus 300 may select one of the two cash cassettes 310 in order to withdraw cash. Cash withdrawn one by one from the cash cassette 310 is transferred by the first transfer unit 320 and loaded in the temporary stack part 330 in a sheet. When a predetermined amount of the cash is loaded in the temporary stack part 330, the temporary stack part 330 is transferred to the second transfer unit 360 by the stack transfer element 350 and the cash stack may be located on a transfer pathway defined by the second transfer unit 360 and transferred to the withdrawal part 370.

[0051] The cash is discharged from the cash cassette 310 in response to the rotation of a pickup roller 312, and the discharged cash is transferred to the temporary stack part 330 by the first transfer unit 320. The first transfer unit 320 includes a plurality of first transfer belts 321 through 324 for transferring the cash. The first transfer belts 321 through 324 are disposed facing each other in order to provide a first pathway I. Accordingly, the cash withdrawn in a sheet is moved along the first pathway I provided between the first transfer belts 321 through 324 and transferred to the temporary stack part 330.

[0052] The temporary stack part 330 includes a stack transfer belt 332, and the cash transferred from the first

transfer unit 320 is located on the stack transfer belt 332 one by one. The temporary stack part 330 supporting the cash stack is transferred to the second transfer unit 260 by the stack transfer element 350.

[0053] The stack transfer element 350 includes a stack driving part 352 and a stack elevation part 354. The stack elevation unit 354 is connected to the temporary stack part 330 to be coupled with the temporary stack part 330 such that the temporary stack part 230 can move along a regular pathway. The rotation of the stack driving part 352 may be easily converted into the round-trip movement of the temporary stack part 330 by using a rotation element having a cam surface. That is, a part of the temporary stack part 330 may move along the cam surface of the rotation element, the temporary stack part 330 may vertically ascend and descend in response to the rotation of the rotation element.

[0054] Also, the second rejecting box 380 is provided adjacent to the temporary stack part 330. The top surface of the second rejecting box 380 installed in the withdrawal apparatus 300 is opened, an opening of the second rejecting box 380 may be selectively opened and closed according to the move of a movable cover 382. Accordingly, when the movable cover 382 covers the opening of the second rejecting box 380, the cash stack may be carried to the withdrawal part 370, and when the movable cover 382 opens the opening of the second rejecting box 380, the cash passing the second pathway II may enter the second rejecting box 380. In case that a customer does not receive the cash, it is necessary to reject the cash again. In addition, in case that a power failure unexpectedly occurs or some of the cash is left in the withdrawal part, the cash remains on the second pathway II. In this case, the cash on the second pathway II may be removed by using the second transfer unit 360 and the second rejecting box 380.

[0055] As illustrated in FIG. 6, the temporary stack part 330 is disposed at an end portion of the first transfer unit 320 and the cash is deposited in order. The movable cover 382 covers the top of the temporary stack part 330, and the second rejecting box 380 is kept to be opened.

[0056] Referring to FIG. 7, a rotation element of the stack elevation part 354 rotates counter clockwise, the temporary stack part 330 ascends to access the second transfer unit 360, the movable cover 382 moves together with a guide 384 coupled with the rotation element and may cover the top surface of the second rejecting box 380. As the movable cover 382 moves above the second rejecting box 380, the temporary stack part 330 may be closely adhered to the second transfer unit 360. Then, the temporary stack part 330 and the movable cover 382 may function as a part of the second transfer unit 360. The top surface of the stack transfer belt 332 is located approximately identical with the second pathway II, a transfer belt of the movable cover 382 is also located on the second pathway II. As described above, when the temporary stack part 330 is moved to the second transfer unit 360, rollers and shafts on both ends of the temporary stack part 330 are functionally connected to a driving part (not shown) of the second transfer unit 360. Thus the stack transfer belt 332 traveling the rollers moves along the second pathway II and forms a part of the second transfer unit 360.

[0057] After the temporary stack part 330 is transferred to the second transfer unit 360, the second transfer unit 360

may start to operate and transfer the cash stack in the temporary stack part 330 to the withdrawal part 370. In the withdrawal part 370, the cash stack is kept being partially held by the second transfer unit 360. If a customer does not take the cash in the withdrawal part 370, the second transfer unit 360 may reversely operate and collect the cash that is not taken.

[0058] Only, before that, the rotation element of the stack elevation part 354 rotates clockwise and moves the temporary stack part 330 downward. The movable cover 382 moves along the second pathway II and opens the top surface of the second rejecting box 380. After the second rejecting box 380 is opened, the second transfer unit 360 may reversely rotate to take the cash. The taken cash may be stored in the second rejecting box 380.

[0059] FIG. 8 is a configuration diagram illustrating the withdrawal apparatus of FIG. 6.

[0060] Referring to FIG. 8, in the withdrawal apparatus 300 according to the present embodiment, since the first transfer unit 320 is separated from the second transfer unit 360, the conversion between the front insertion type and the rear insertion type is very easy. Concretely, the second transfer unit 360 further includes a withdrawal extension part 368 installed adjacent to the withdrawal part 370, and the withdrawal extension part 368 may be selectively installed at the front end or the rear end. Though the conversion between the front insertion type and the rear insertion type may be possible by switching the drive direction of the second transfer unit 360 without the withdrawal extension part 368, the structure capable of easily holding cash is formed in the withdrawal extension part 368, thereby specializing the function of withdrawing cash. The withdrawal extension part 368 also operates coupled with the second transfer belts. For this, the structure of supplying power, which is mutually symmetrical, may be provided on the front and rear upper ends of the withdrawal apparatus.

[0061] In the apparatus of the present invention, first and second transfer units are mutually separated and may independently operate. Since the first transfer unit transfers cash one by one from a cash cassette to a temporary stack part and does not reversely moves, possibility of occurrence of a jam is small. Also, the second transfer unit transfers the cash transferred to a transfer pathway by the temporary stack part in a stack and may operate regardless of the first transfer unit.

[0062] Accordingly, in the withdrawal apparatus of the present invention, the conversion with respect to front insertion or rear insertion may be easily performed and it is possible to install one model in many kinds of machines.

[0063] While the present invention has been particularly shown and described with reference to exemplary embodiments thereof, it will be understood by those of ordinary skill in the art that various changes in form and details may be made therein without departing from the spirit and scope of the present invention as defined by the following claims.

What is claimed is:

1. A withdrawal apparatus of a cash transaction machine, comprising:

- a storage means for storing paper media;
- a stack means for stacking the paper media transferred from the storage means;

a withdrawal means for presenting a stack of the paper media transferred from the stack means to a customer;

a first transfer means for transferring the paper media from the storage means to the stack means;

a second transfer means for transferring the stack of the paper media from the stack means to the withdrawal means, which is separated from the first transfer means; and

a stack transfer means for transferring the stack of the paper media in the stack means on a pathway defined by the second transfer means.

2. The apparatus of claim 1, wherein each of the first and second transfer means includes transfer belts circulating and facing each other, the transfer belts defining a pathway for transferring the paper media or the stack of the paper media therebetween.

3. The apparatus of claim 2, wherein a plurality of the transfer belts are separated at a predetermined interval and move parallel to each other along the pathway for the paper media or the stack of the paper media.

4. The apparatus of claim 1, wherein the stack means includes a stack supporter located adjacent to an outlet of the first transfer means, and the stack supporter is moved from the outlet of the first transfer means to the second transfer means by the stack transfer means, until the top surface of the stack supporter is nearly in accordance with the pathway defined by the second transfer means.

5. The apparatus of claim 1, wherein the stack transfer means includes a stack driving part and a stack elevation part for transferring the stack supporter from the outlet of the first transfer means to the pathway defined by the second transfer means.

6. The apparatus of claim 1, further comprising a first rejecting means located in a pathway defined by the first transfer means and storing selected paper media, the first rejecting means including a diverting portion for diverting the pathway of the selected paper media and a first rejecting part for storing the selected paper media.

7. The apparatus of claim 1, further comprising a second rejecting means for removing the paper media remaining on the pathway defined by the second transfer means, the second rejecting means including a second rejecting part including an opening located adjacent to the pathway defined by the second transfer means and a movable cover moving along the pathway defined by the second transfer means to selectively open and close the opening of the second rejecting part.

8. A withdrawal apparatus of a cash transaction machine, comprising:

- a storage for storing paper media;
- a temporary stack part for stacking the paper media transferred from the storage;
- a withdrawal part for presenting a stack of the paper media transferred from the temporary stack part to a customer;
- a first transfer element including first transfer belts moving along a first pathway connecting the storage and the temporary stack part and disposed opposite and parallel to each other, the first transfer element transferring the paper media from the storage to the temporary part one by one;

a second transfer element including second transfer belts moving along a second pathway, the second pathway separated from the first pathway and connected to the withdrawal part, two of the second transfer belts are separated from each other such that the second pathway is partially exposed toward the temporary stack part; and

a stack transfer element including a stack driving part and a stack elevation part transferring the temporary stack part to the second pathway partially exposed.

9. The apparatus of claim 8, wherein the temporary stack part includes stack transfer belts formed corresponding to the second transfer belts, in which the stack transfer belts form a part of the second part in case that the temporary stack part is interposed between the second transfer belts.

10. The apparatus of claim 8, further comprising a first rejecting element located adjacent to the first pathway and storing selected paper media, in which the first rejecting element includes a diverting guide for switching the pathway of the selected paper media and a first rejecting part for

storing the selected paper media diverted by the diverting guide.

11. The apparatus of claim 8, further comprising a second rejecting element for removing the paper media remaining on the second pathway, the second rejecting element including a second rejecting part including an opening located adjacent to the exposed part of the second pathway and a movable cover moving along the second pathway in order to selectively opens one of the opening of the second rejecting part and the exposed part of the second pathway for the temporary stack part.

12. The apparatus of claim 8, wherein the second transfer element further includes a withdrawal extension part extending the second pathway to the withdrawal part, the withdrawal part selectively installed at one of the front end and rear end of the second pathway defined by the second transfer belt and operatively coupled with the second transfer belt.

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