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(54) **HYBRID PRESS UNIT**

HYBRIDPRESSE

APPAREIL DE PRESSAGE HYBRIDE

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**WO-A1-2004/089646** **US-A- 4 733 856**



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## Description

### The Related Art

**[0001]** The invention relates to a hybrid press unit, which provides letter, document etc. notification texts having great importance be pressed and enveloped in a secure manner.

**[0002]** The present invention relates to an envelope table and a paper inlet which are positioned opposite to each other and in which envelope and paper move forward in opposite directions, barcode readers which read the barcode numbers situated on the envelope and the paper when the said envelope and the paper proceed by means of a drive centre and move components, and skidder piece which provides placement of the paper inside the envelope via a motor belt after barcodes are matched.

### Background of the Invention

**[0003]** Nowadays, with the development of fast communication devices, demand has increased rapidly and there are companies which provide service and have to respond to their customers for these demands in written or verbal ways.

**[0004]** For instance, banks providing credit cards to their customers, in the first phase, send the credit cards to their customers via mail courier, or cargo. The credit cards are sent in an envelope and together with a preliminary notification text. While these texts have privacy, also their security has to be ensured.

**[0005]** For example, it is a must for the informative texts comprising private information and having great importance be written automatically without human touch. However, this privacy and security principle can not be completely ensured in the prior art.

**[0006]** Again in the prior applications, pressing and enveloping operations can be done in large press centres in terms of both volume and weight and thus mobile application can not be performed. The pressing and enveloping operation made in press centres is a costly operation and its back up certainly has to be kept in a back up centre. This back up operation presents security problems especially for messages having high level of privacy.

**[0007]** The messages can be delivered to wrong addresses, because pressing is made from the press centres without confirming the receiver addresses or wrong addresses, which are not up-to-date, may be left on receipt etc. documents. This prevents both delivery of the message at the right address in a secure manner and brings about paper cost due to the wrongly pressed address information.

**[0008]** As a result of the patent research made, some patent applications are situated, which are developed for enveloping of notification texts. Among these applications; there is a patent application with no US7600755 registered in the name of PITNEY BOWES LTD with date 2009-10-13. In the abstract part of this application, these expressions are found; it comprises friction drive belt, support plate drive belt, a repositionable backstop assembly disposed along the feed path of the envelope for arresting the motion of the envelope when disposed in a first position and permitting the conveyance along the feed path when disposed in a second position, a means for developing a pressure differential across the envelope for urging the envelope into frictional engagement with the friction drive belts, and a breaker plate disposed over and across an upstream portion of the friction drive belts to reduce friction drive forces developed along an upstream end portion of the envelope.

**[0009]** US-A-4 733 856 discloses a hybrid press unit according to the preamble of claim 1.

### Description of the Invention

**[0010]** Purpose of the invention relates to a press unit, which provides a novel development in this technical field with regards to the embodiments used in the prior art, and which has different technical properties.

**[0011]** A purpose of the invention is to provide a press unit, which facilitates mobile accomplishment of the pressing and enveloping operations, and which has a light and ergonomic structure.

**[0012]** A purpose of the invention is to have a security system, which provides security of documents having great importance, and which carries out the pressing and enveloping operations in an environment in which no human touch is present.

**[0013]** Another purpose of the invention is to provide a structure which does not require a separate back up centre for the back up of the press made.

**[0014]** Another purpose of the invention is to provide placement of the document inside the envelope by moving forward the movable paper tray towards the envelope and firstly lowering the envelope tag and then placing the paper guides inside the envelope.

**[0015]** Another purpose of the invention is to provide pushing of the pressed document or receipt inside the envelope after placement of the guides inside the envelope and just after the paper placement operation in the envelope, paper unit comes back and envelope cover closing operation occurs and then the envelope is thrown out in an enveloped

manner.

**[0016]** Another purpose of the invention is to provide a secure press unit in which data privacy is in the foreground.

**[0017]** Another purpose of the invention is to provide a press unit which gives confirmation about whether the delivery has arrived to its destination in a secure manner or not.

**[0018]** Another purpose of the invention is to provide a structure, which minimizes paper costs occurring due to press and possible errors.

**[0019]** Another purpose of the invention is to provide a structure which facilitates monitoring the electronic and physical travel of the delivery.

**[0020]** Another purpose of the invention is to provide a structure which ensures monitoring the messages via the GPS modules situated on it concurrently by controlling whether they are delivered by the deliverers at the right time and place or not.

**[0021]** Another purpose of the invention is to provide a structure, which keeps the information of which paper is pressed and enveloped in which envelope, and which can report the said information as desired.

**[0022]** Another purpose of the invention is to provide a structure which accomplishes the enveloping operation with zero margins of error via the sensor used.

**[0023]** Another purpose of the invention is to provide a structure which, if preferred, prevents document delivery if the receiver confirmation does not come during the delivery of the documents.

**[0024]** Another purpose of the invention is to provide a structure which provides the communication information of the receiver formed on the server according to the location of the deliverer and/or the message content be sent by being encrypted or not encrypted.

**[0025]** In order to achieve the above said purposes, the invention comprises a hybrid press unit according to claim 1. Said hybrid press unit particularly comprises an envelope table and a paper inlet which are positioned opposite to each other and in which envelope and paper move forward in opposite directions, barcode readers which read the barcode numbers situated on the envelope and the paper when the said envelope and the paper proceed by means of a drive centre and move components, and skidder piece which provides placement of the paper inside the envelope via a motor belt after barcodes are matched.

**Figures for Better Understanding of the Invention**

**[0026]**

Figure-1; is the general perspective view of the enveloping unit, which is the subject of the invention.

Figure-2; is the close plan perspective view of the enveloping unit, which is the subject of the invention, together with the envelope cover folding and binding cylinder and barcode readers.

Figure-3; is the close plan perspective view of the skidder piece placing the paper into the envelope in the enveloping unit, which is the subject of the invention.

Figure-4; is the close plan detail view showing the sensor, belt strut and rubber belt in the enveloping unit, which is the subject of the invention.

Figure-5; is the perspective view of the enveloping unit, which is the subject of the invention, in a position where it is folded via the folding region.

Figure-6; is the close plan view of the control unit of the enveloping unit, which is the subject of the invention.

Figure-7; is the close plan perspective view of the envelope catcher and folding cylinders situated in the enveloping unit, which is the subject of the invention.

**Part Numbers**

| | | | |
|---|---|---|---|
| 10 | - Carrier body | 17 | - Mounting piece |
| 11 | - Cylinder | 18 | - Envelope skidder head |
| 12 | - Exciter arm | 19 | - Envelope catcher cylinder |
| 13 | - Folding hinge | 20 | - Envelope table |
| 14 | - Motion transmission gears | 21 | - Sensor |
| 15 | - Bearing component | 22 | - Barcode backboard |
| 16 | - Small gear | 23 | - Barcode reader |
| 24 | - Paper inlet | 38 | - Park area |
| 25 | - Belt strut | 39 | - Drive centre |
| 26 | - Sensor | 40 | - Move components |

(continued)

| | | | |
|---|---|---|---|
| 27 | - Sensor exciter | 41 | - Paper |
| 28 | - Mounting bracket | 42 | - Envelope |
| 29 | - Motor | 43 | - Envelope catcher cylinder |
| 30 | - Belt | 44 | - Envelope folding cylinder |
| 31 | - Bearer foot | 45 | - Control unit |
| 32 | - Press wheels | 46 | - GPS Module |
| 33 | - Envelope guide | 47 | - Memory component |
| 34 | - Paper stacking tray | 48 | - Wireless receiver |
| 35 | - Motion roller | 49 | - Processor |
| 36 | - Skidder piece | 50 | - Press unit |
| 37 | - Spring | | |

**Detailed Description of the Invention**

**[0027]** The invention relates to a hybrid press unit, which provides letter, bill, receipt etc. informative private texts and texts requiring security be pressed and enveloped without human touch, and which has movable property, and it comprises an envelope table (20) and a paper inlet (24) which are positioned opposite to each other and in which envelope (42) and paper (41) move forward in opposite directions, barcode readers (23) which read the barcode numbers situated on the envelope (42) and the paper (41) when the said envelope (42) and the paper (41) proceed by means of a drive centre (39) and move components (40), and skidder piece (36) which provides placement of the paper (41) inside the envelope (42) via a motor (29) belt (30) after barcodes are matched.

**[0028]** The present invention comprises a carrier body (10) on which all parts of the press unit (50) are positioned and fixed and a folding hinge (13) providing folding of this body into half, small gear (16) and motion transmission gear (14) providing rotating motion to the envelope catcher cylinders (43) and folding cylinders (44) of the said move components (40) and mounting piece (17) on which these gears (14, 16) are fixed, envelope skidder head (18) and envelope catcher cylinder (19) providing positioning of envelope (42) on the said envelope table (20), a park area (38) on which the envelope (42) is kept waiting for the matching of the barcode numbers situated on the said paper (41) and envelope (42), a cylinder (11) and exciter arm (12) providing closing and binding of the envelope cover just after the operation of paper placement into the envelope, a paper stacking tray (34) and bearer foot (31) on which the said skidder piece (36) is placed in a way that it would move back-and-forth, press wheels (32) applying pressure from above to the paper placed on the said paper stacking tray (34), an envelope guide (33) on which the said press wheels (32) are fixed, a motion roller (35) providing the back-and-forth movement of the said skidder piece (36) via the drive it takes from the motor (29), a belt strut (25) providing the tension adjustment of the said motion roller (35) and a spring (37) connected to that belt strut, bearing component (15) providing fixing of the said belt strut (25) at the lower part of the stacking tray (34), at least one sensor (26) sensor (21), which determine the regions where the envelope (42) and the paper (41) would stay and which trigger the system, a barcode backboard (22) which is positioned in an angular manner and which provides the barcode situated on the envelope advancing over the said envelope table (20) be read, at least one sensor (26) and sensor exciter (27) positioned at the lower part of the said paper stacking tray (34), mounting bracket (28) providing fixing of the motor (29) at the lower part of the said paper stacking tray (34), envelope catcher cylinder (43) and envelope folding cylinder (44) providing orientation and folding of the said envelope (42), and a control unit (45) providing starting and halting of the press unit (50).

**[0029]** The way of operation of the press unit (50) is as follows; the envelope (42) is placed in the envelope table (20) and the transfer gear (14) and the small gear (16) rotates the envelope catcher cylinders (19) via the drive centre (39) and thus the envelope (42) moves forward. In the first place, the barcode number situated on the envelope is read via the barcode reader (23) and the barcode backboard (22). Because the barcode reader (23) is left at the underside, the barcode situated on the envelope is read via a backboard (22) placed in an angular position. Afterwards, envelope waits in the park area (38). The reason of the envelope (42) being kept waiting here is to provide matching of the paper (41) placed from the paper inlet (24) with the envelope (42). Because, the paper to be placed inside the envelope has to have the same barcode number with the barcode number placed on the envelope.

**[0030]** When the paper moved forward, reaches the park area (38), it is placed into the envelope with the envelope which is held at the park area (38) and the skidder piece (36) on which pressure is applied via the press wheels (32) (see figure-3). The movement of the skidder piece (36) is provided via a motor (29) and belt (30) in the form of a linear back-and-forth movement. The belt used here is a rubber belt (30) and the tension adjustment of the said belt (30) is provided via belt strut (25). The back-and-forth movement of the skidder piece (36) is provided via sensor (26). And the sensor (26) is in fixed position at the lower surface the paper stacking tray (34).

**[0031]** When the placement operation of the paper (41) to be placed into the envelope (42) is completed, the binding operation of the envelope cover is made via the exciter arm (12) and the cylinder (11). The carrier body (10) has a structure having two-parts and it can be folded into half via the folding hinge (13). In this way, a compact structure is obtained. The press unit (50) is controlled via the control unit (45).

**[0032]** Via the GPS module (46) positioned inside the said control unit (45), the place where the message is pressed and enveloped can be determined, and the correctness of the address can be confirmed. During the address confirmation made through the GPS module (46) of the said hybrid press unit, if the address information is wrong, in a preferred embodiment of the invention, the processor (49) situated on the control unit (45) prevents performing of the press.

**[0033]** Simultaneous with the pressing operation, in order to provide online back up of the pressed information, memory component (47) is positioned on the control unit (45). The information saved in the said memory component (47) can be transferred to a central database when desired.

**[0034]** The wireless receiver (48) placed on the said control unit (45) can provide exchange of information with the delivery centre. The said wireless receiver (48) can be one of the bluetooth, WiFi, GPRS etc. protocols providing communication.

**[0035]** Usage of the hybrid press unit, which is the subject of the invention is exemplified with the below given scenario.

**[0036]** The sender - customer- sends the message content and the physical address of the receiver to the database of the mail service provider. Database decides on which unit and which device that it will forward the data according to the physical address of the receiver and the delivery unit region and the deliverer - messenger- region. As a result of these operations, the data is stored in the memory component (47) positioned on the hybrid press unit. Deliverer - messenger- reaches the physical address of the receiver, and the system gets the confirmation of whether the operation is made at the right address or not via the receiver address and the coordinate information it takes through the GPS module (46) positioned on the unit. If the address does not fit, it does not permit operation.

**[0037]** The deliverer confirms whether the receiver is at the address or not and if it is a secure reference, requests from the receiver to enter the security password. If all the conditions are met, permission is given for pressing. The hybrid press unit demands the required paper (41) and envelope (42), checks them from the barcodes via the barcode readers (23), and performs pressing while saving at the memory component (47). The enveloping unit steps in and the pressed documents are delivered to the receiver after being enveloped.

**[0038]** In the end, the information of where, when, and to whom the message is delivered is simultaneously processed in the database through the wireless receiver (48).

## Claims

1. A hybrid press unit, which provides letter, bill, receipt etc. informative private texts and texts requiring security be pressed and enveloped without human touch, and which has portable usage feature, comprising an envelope table (20) and a paper inlet (24) which are positioned opposite to each other and in which envelope (42) and paper (41) moves forward in opposite directions, drive centre (39) and move components (40) for advancing of the said envelope (42) and paper (41), and it is **characterized in that**; it comprises at least one skidder piece (36) which provides placement of the paper (41) inside the envelope (42) via a motor (29) belt (30) a carrier body (10) on which all parts of the press unit (50) are positioned and fixed and a folding hinge (13) providing folding of this body into half.

2. A hybrid press unit according to Claim 1 and it is **characterized in that**; it comprises small gear (16) and motion transmission gear (14) providing rotating motion to the envelope catcher cylinders (43) and folding cylinders (44) of the said move components (40) and mounting piece (17) on which these gears (14, 16) are fixed.

3. A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises barcode readers (23) which read the barcode numbers situated on the envelope (42) and the paper (41) when they proceed via the move components (40).

4. A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises envelope skidder head (18) and envelope catcher cylinder (19) providing positioning of envelope (42) on the said envelope table (20).

5. A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a park area (38) on which the envelope (42) is kept waiting for the matching of the barcode numbers situated on the said paper (41) and envelope (42).

6. A hybrid press unit according to any one of the above claims, and it is **characterized in that**: it comprises a cylinder

(11) and exciter arm (12) providing closing and binding of the envelope cover just after the operation of paper placement into the envelope.

**7.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**: it comprises a paper stacking tray (34) and bearer foot (31) on which the said skidder piece (36) is placed in a way that it would move back-and-forth.

**8.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises press wheels (32) applying pressure from above to the paper placed on the said paper stacking tray (34).

**9.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises an envelope guide (33) on which the said press wheels (32) are fixed.

**10.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a motion roller (35) providing the back-and-forth movement of the said skidder piece (36) via the drive it takes from the motor (29).

**11.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a belt strut (25) providing the tension adjustment of the said motion roller (35) and a spring (37) connected to that belt strut.

**12.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises bearing component (15) providing fixing of the said belt strut (25) at the lower part of the stacking tray (34).

**13.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises at least one sensor (26) sensor (21), which determine the regions where the envelope (42) and the paper (41) would stay and which trigger the system.

**14.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a barcode backboard (22) which is positioned in an angled position and which provides the barcode situated on the envelope advancing over the said envelope table (20) be read.

**15.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises at least one sensor (26) and sensor exciter (27) positioned at the lower part of the said paper stacking tray (34).

**16.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises mounting bracket (28) providing fixing of the motor (29) at the lower part of the said paper stacking tray (34).

**17.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises envelope catcher cylinder (43) and envelope folding cylinder (44) providing orientation and folding of the said envelope (42).

**18.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a control unit (45) providing starting and halting of the press unit (50).

**19.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises memory component (47), which is placed on the said control unit (45) for providing online back up of the pressed information concurrent with the said pressing operation.

**20.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a GPS module (46), which is positioned on the said control unit (45), and which compares the physical address of the receiver with the coordinate information it gets and thus provides confirmation about whether the operation is made in the correct address or not.

**21.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises a processor (49), which is positioned on the positioned on the said control unit (45), and which prevents performing of the pressing and/or enveloping operation when the said confirmation operation is unsuccessful.

**22.** A hybrid press unit according to any one of the above claims, and it is **characterized in that**; it comprises at least one wireless receiver (48), which provides concurrent transmission of information to the delivery centre such as to

whom, where, and when the reference is made.

## Patentansprüche

1. Eine Hybrid-Druckeinheit, welche ermöglicht, Briefe, Rechnungen, Quittungen, informative private Texte und Texte die Sicherheit erfordern, ohne menschliches Zutun zu drucken und zu kuvertieren, und welche eine mobile Nutzfunktion hat, eine Ablage für Umschläge (20) und eine Papierzuführung (24), welche einander gegenüber gestellt sind und in denen sich Umschlag (42) und Papier (41) in entgegengesetzte Richtungen vorwärts bewegen, ein Antriebszentrum (39) und Bewegungsteile (40), um den genannten Umschlag (42) und das Papier (41) vorzubewegen, umfasst, **dadurch gekennzeichnet, dass** sie mindestens ein Schlepperstück (36), welches die Platzierung des Papiers (41) im Umschlag (42) mit Hilfe eines Keilriemens (29,30) ermöglicht, einen Tragekörper (10), auf dem alle Teile der Druckeinheit (50) positioniert und befestigt sind sowie ein Klappscharnier (13), welches diesen Körper in zwei faltet, umfasst.

2. Eine Hybrid-Druckeinheit nach Anspruch 1, **dadurch gekennzeichnet, dass** sie ein kleines Zahnrad (16) und ein Bewegungsübertragungsgetriebe (14) umfasst, welche Drehbewegungen der Umschlagfangzylinder (43) und der Faltzylinder (44) der genannten Bewegungskomponenten (40) und des Befestigungsteils (17), auf dem diese Zahnräder (14,16) befestigt sind, ermöglichen.

3. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie Barcode-Leser (23) beinhaltet, welche die Barcodenummern auf dem Umschlag (42) und dem Papier (41) lesen, wenn sie sich über die Bewegungskomponenten (40) voranbewegen.

4. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie einen Umschlagschlepperkopf (18) und einen Umschlagfangzylinder (19) umfasst, welche die Positionierung des Umschlags (42) auf der genannten Ablage für Umschläge (20) ermöglichen.

5. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Parkfläche (38) umfasst, auf welcher der Umschlag (42) auf die Zuordnung der Barcodezahlen, die sich auf dem genannten Papier (41) und dem Umschlag (42) befinden, wartet.

6. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie einen Zylinder (11) und einen Erregerarm (12) umfasst, welche das Schließen und das Binden des Umschlagdeckels unmittelbar nach der Platzierung des Papiers in den Umschlag ermöglichen.

7. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Papierstapelablage (34) und einen Trägerfuß (31) umfasst, auf dem das genannte Schlepperstück (36) so platziert ist, dass es sich vor- und zurückbewegen kann.

8. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie Druckräder (32) umfasst, welche von oben Druck auf das auf der genannten Papierstapelablage (34) befindliche Papier ausüben.

9. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie einen Umschlagführer (33) umfasst, auf dem die genannten Druckräder (32) befestigt sind.

10. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Bewegungsrolle (35) umfasst, welche das Vor- und Zurückbewegen des genannten Schlepperstücks (36) mittels des Antriebs des Motors (29) ermöglicht.

11. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Gurtverstrebung (25), welche die Anpassung der Spannung der genannten Bewegungsrolle (35) ermöglicht, und eine Feder (37), welche mit der Gurtverstrebung verbunden ist, umfasst.

12. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Lagerkomponente (15) umfasst, welche die Befestigung der genannten Gurtverstrebung (25) am unteren Teil der Stapelablage (34) ermöglicht.

13. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie mindestens einen Sensor (26) Sensor (21) umfasst, welche die Bereiche, in denen sich der Umschlag (42) und das Papier (41) befinden, bestimmen, und welche das System auslösen.

14. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Barcode-Rückwand (22) umfasst, welche in einer angewinkelten Position ist und welche ermöglicht, dass der Barcode auf dem sich auf der genannten Ablage für Umschläge (20) vorbewegenden Umschlag gelesen wird.

15. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie mindestens einen Sensor (26) und Sensorerreger (27) umfasst, welche sich am unteren Teil der Papierstapelablage (34) befinden.

16. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie einen Befestigungswinkel (28) umfasst, welcher das Fixieren des Motors (29) am unteren Teil der Papierstapelablage (34) ermöglicht.

17. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie einen Umschlagfangzylinder (43) und einen Umschlagfaltzylinder (44) umfasst, welche die Ausrichtung und das Falten des genannten Umschlags (42) ermöglichen.

18. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Kontrolleinheit (45) umfasst, welche das Starten und das Anhalten der Druckeinheit (50) ermöglicht.

19. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie eine Speicherkomponente (47) umfasst, welche auf der genannten Kontrolleinheit (45) platziert ist, um gleichzeitig mit dem genannten Druckvorgang die Online-Sicherung der gedruckten Informationen zu ermöglichen.

20. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie ein GPS-Modul (46), welches auf der genannten Kontrolleinheit (45) positioniert ist, und welches die physikalische Adresse des Empfängers mit den Koordinateninformationen, die es erhält, vergleicht und somit eine Bestätigung darüber liefert, ob der Vorgang an die richtige Adresse gemacht wurde oder nicht.

21. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie einen Prozessor (49) umfasst, welcher auf der genannten Kontrolleinheit (45) positioniert ist, und welcher den Vorgang des Druckens und/oder des Kuvertierens verhindert, wenn der genannte Bestätigungsvorgang erfolglos ist.

22. Eine Hybrid-Druckeinheit nach einem der obigen Ansprüche, **dadurch gekennzeichnet, dass** sie mindestens einen drahtlosen Empfänger (48) umfasst, welcher die gleichzeitige Übertragung der Informationen, wie etwa zu wem, wohin und wann Bezug genommen wird, an das Lieferzentrum ermöglicht.

**Revendications**

1. Une unité hybride de presse, qui permet d'imprimer et de mettre sous enveloppe des lettres, des factures, des reçus, des textes privés informatifs et des textes nécessitant une sécurité sans intervention humaine, et qui a une fonction d'usage mobile, qui comprend une table d'enveloppe (20) et un chargeur de papier (24), qui sont positionnés opposés l'un à l'autre et dans lesquels d'enveloppe (42) et le papier (41) se déplacent vers l'avant dans des directions opposées, un centre d'entraînement (39) et des composants de déplacement (40) pour faire avancer ladite enveloppe (42) et le papier (41), et elle est **caractérisée en ce qu'**elle comprend au moins une pièce de passeur (36), qui permet le placement du papier (41) à l'intérieur de l'enveloppe (42) au moyen d'un courroie (29,30), un corps de support (10), sur lequel toutes les parties de l'unité de presse (50) sont positionnées et fixées, et un charnière de pliage (13), qui plie ce corps dans la moitié.

2. Une unité hybride de presse selon la revendication 1, **caractérisée en ce qu'**elle comprend une petite roue dentée (16) et une roue dentée de transmission de mouvement (14) fournissant un mouvement de rotation aux cylindres attrapeurs d'enveloppe (43) et aux cylindres de pliage (44) de ces composants de mouvement (40) et la pièce de montage (17), sur laquelle ces roues dentées (14, 16) sont fixées.

3. Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend des

lecteurs de codes-barres (23) qui lisent les numéros de codes-barres situées sur l'enveloppe (42) et le papier (41) quand ils avancent par les composants de mouvement (40).

**4.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend une tête de passeur d'enveloppe (18) et un cylindre attrapeur d'enveloppe (19) fournissant le positionnement de l'enveloppe (42) sur ladite table d'enveloppe (20).

**5.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un secteur de parc (38) sur lequel l'enveloppe (42) est maintenue en attente du classement des numéros de codes-barres situés sur ledit papier (41) et l'enveloppe (42).

**6.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un cylindre (11) et un bras d'excitation (12) assurant la fermeture et l'attachement de la couverture de l'enveloppe juste après le processus de la mise en place du papier dans l'enveloppe.

**7.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un plateau d'empilage de papier (34) et un pied de support (31) sur lequel ladite pièce de passeur (36) est placée de manière qu'elle peut se déplacer vers l'arrière et vers l'avant.

**8.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend des roues de presse (32) appliquant de la pressure d'en-haut sur le papier qui est placé sur ledit plateau d'empilage de papier (34).

**9.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un guide d'enveloppe (33) sur lequel les roues de presse (32) sont fixées.

**10.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un rouleau de déplacement (35) assurant le mouvement vers l'arrière et l'avant de la pièce de passeur (36) par l'entraînement du moteur (29).

**11.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un support de sangle (25) fournissant le réglage de la tension du rouleau de déplacement (35) et un ressort (37) connecté à ce support de sangle.

**12.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un composant portant (15) assurant la fixation du support de sangle (25) à la partie inférieure du plateau d'empilage (34).

**13.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend au moins un capteur (26) capteur (21), qui déterminent les régions où l'enveloppe (42) et le papier (41) resteraient et qui déclenchent le système.

**14.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un panneau de codes-barres (22) qui est positionné dans une position inclinée et qui assure que le code-barres situé sur l'enveloppe qui avance sur ladite table d'enveloppe (20) est lu.

**15.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend au moins un capteur (26) et un excitateur de capteur (27) qui sont positionnés à la partie inférieure du plateau d'empilage de papier (34).

**16.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un support de montage (28) assurant la fixation du moteur (29) à la partie inférieure dudit plateau d'empilage de papier (34).

**17.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un cylindre attrapeur d'enveloppe (43) et un cylindre de pliage d'enveloppe (44) assurant l'orientation et le pliage de ladite enveloppe (42).

**18.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend une

unité de commande (45) assurant le démarrage et l'arrêt de l'unité de presse (50).

**19.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un composant de mémoire (47) qui est placé sur ladite unité de commande (45) pour fournir la sauvegarde en ligne des informations pressées en même temps que ledit processus d'impression.

**20.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un module GPS (46), qui est positionné sur ladite unité de commande (45), et qui compare l'adresse physique du récepteur avec les informations de coordonnées qu'il obtient et donc fournit une confirmation quant à savoir si le processus s'effectue à l'adresse correcte ou non.

**21.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend un processeur (49) qui est positionné sur ladite unité de commande (45), et qui empêche l'exécution du processus d'impression et/ou de la mise sous enveloppe lorsque ledit processus de confirmation échoue.

**22.** Une unité hybride de presse selon une des revendications ci-dessus, **caractérisée en ce qu'**elle comprend au moins un récepteur sans fil (48), qui permet la transmission simultanée d'informations tel que à qui, où et quand la référence est faite au centre de livraison.

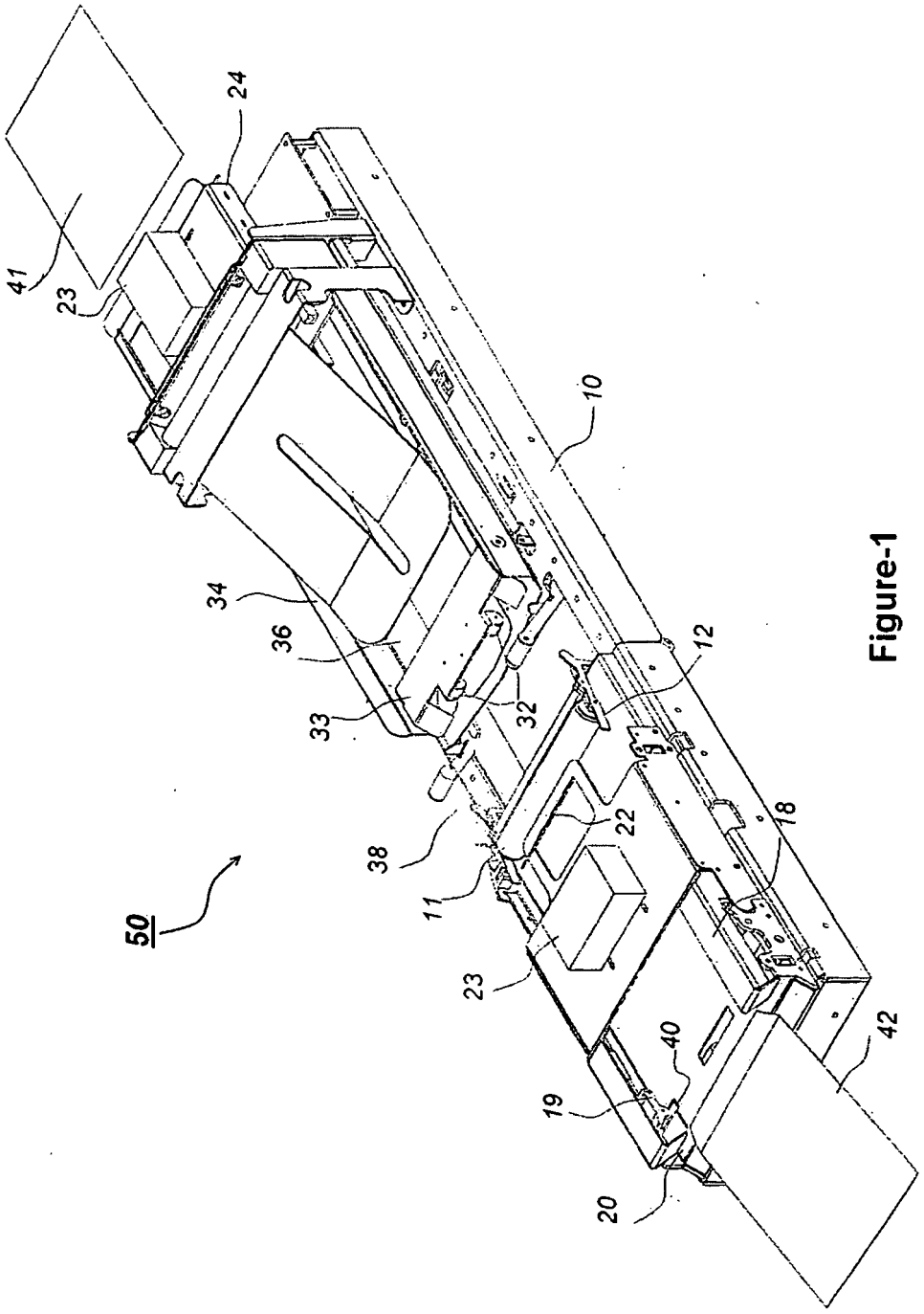


Figure-1

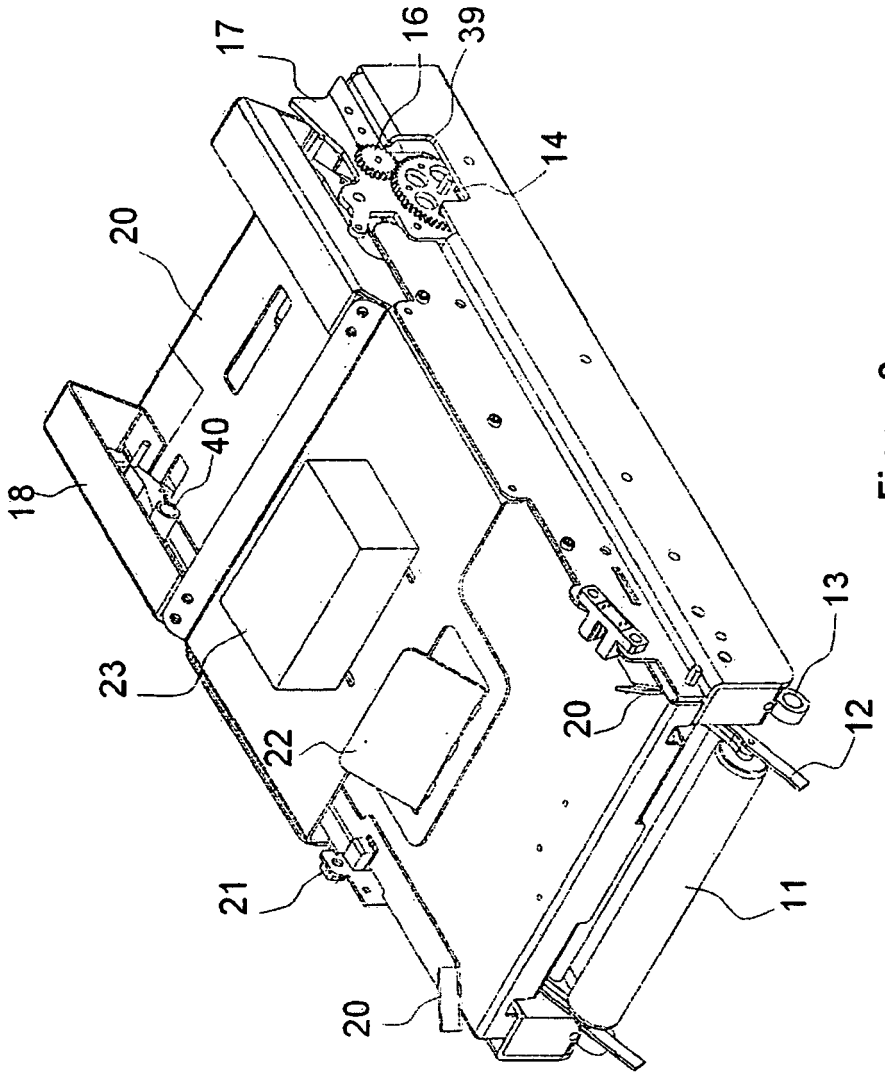


Figure-2

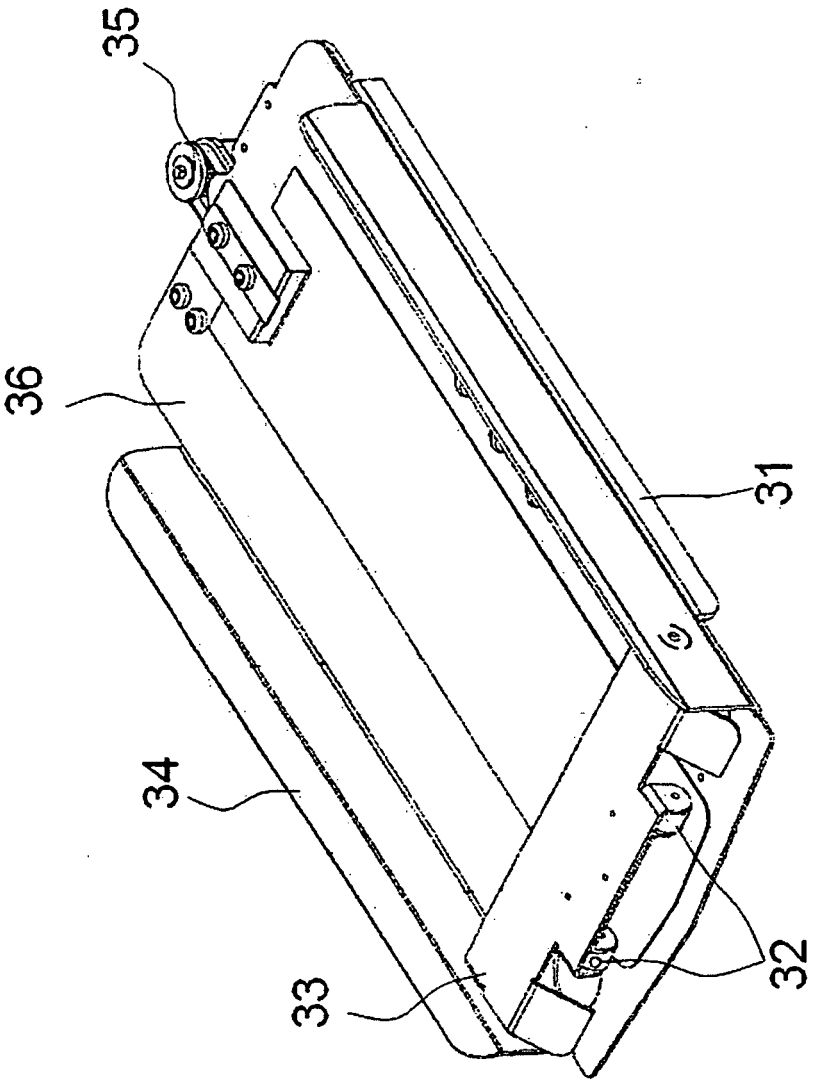


Figure-3

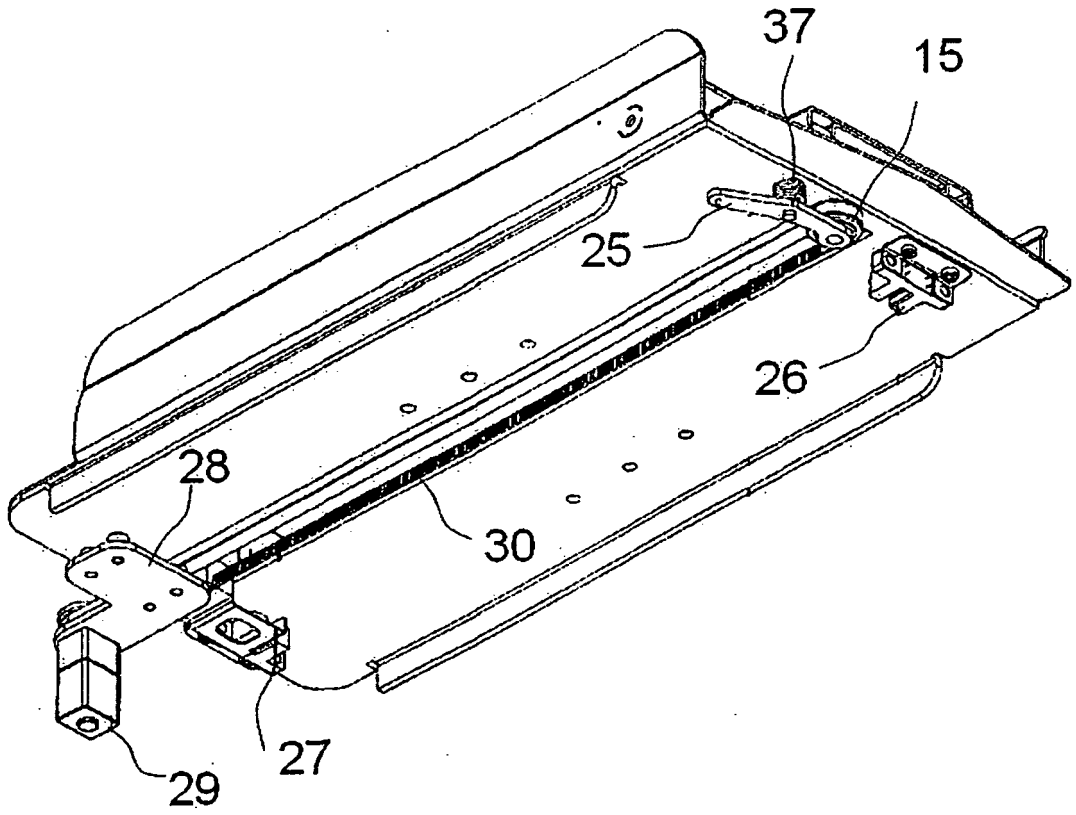


Figure-4

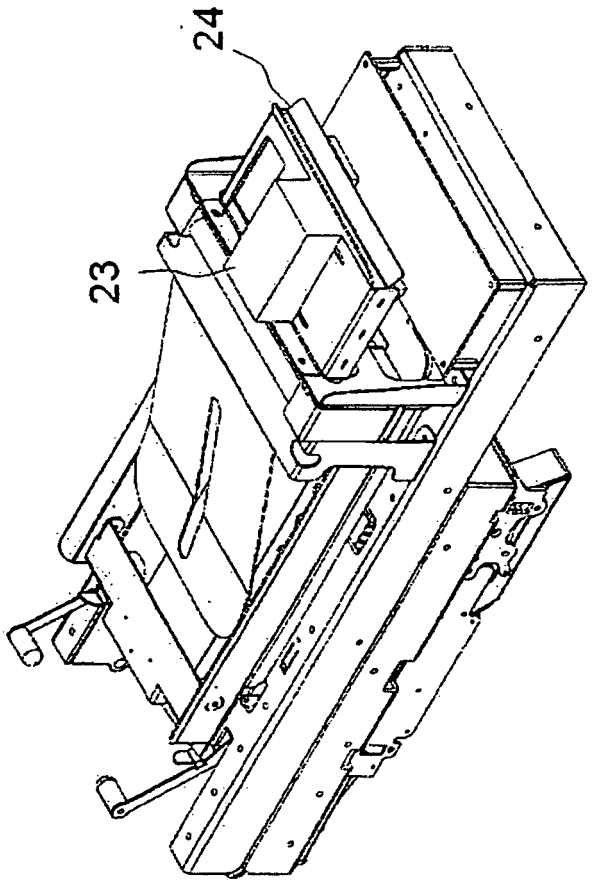


Figure-5

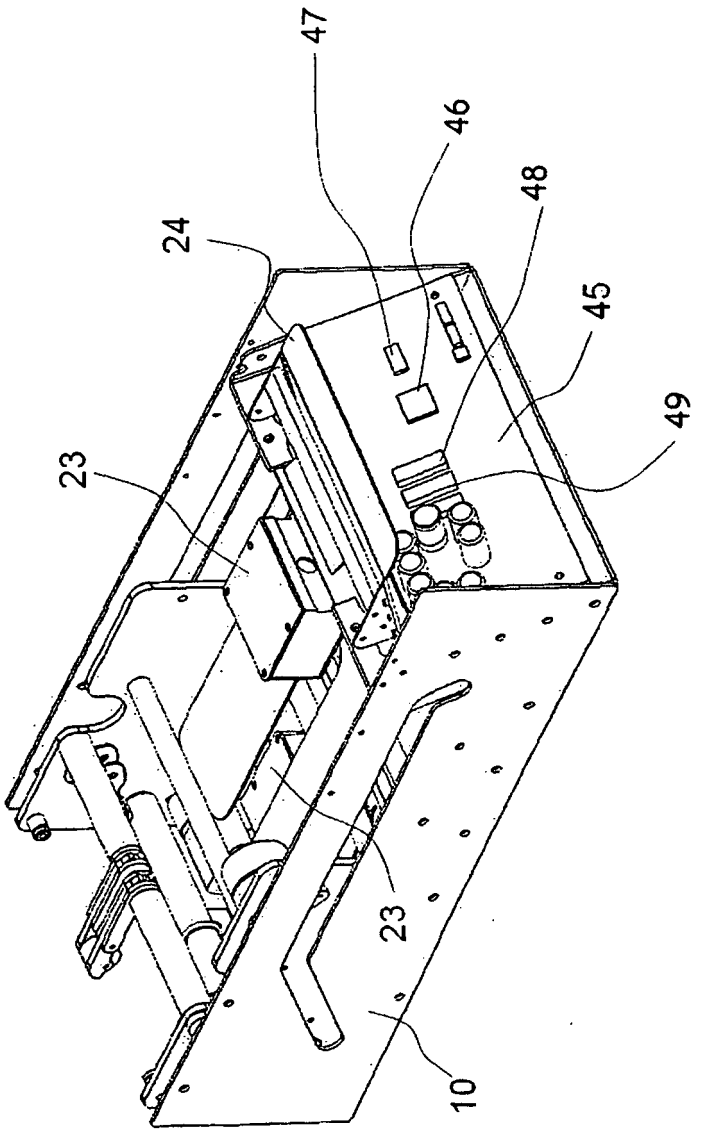


Figure-6

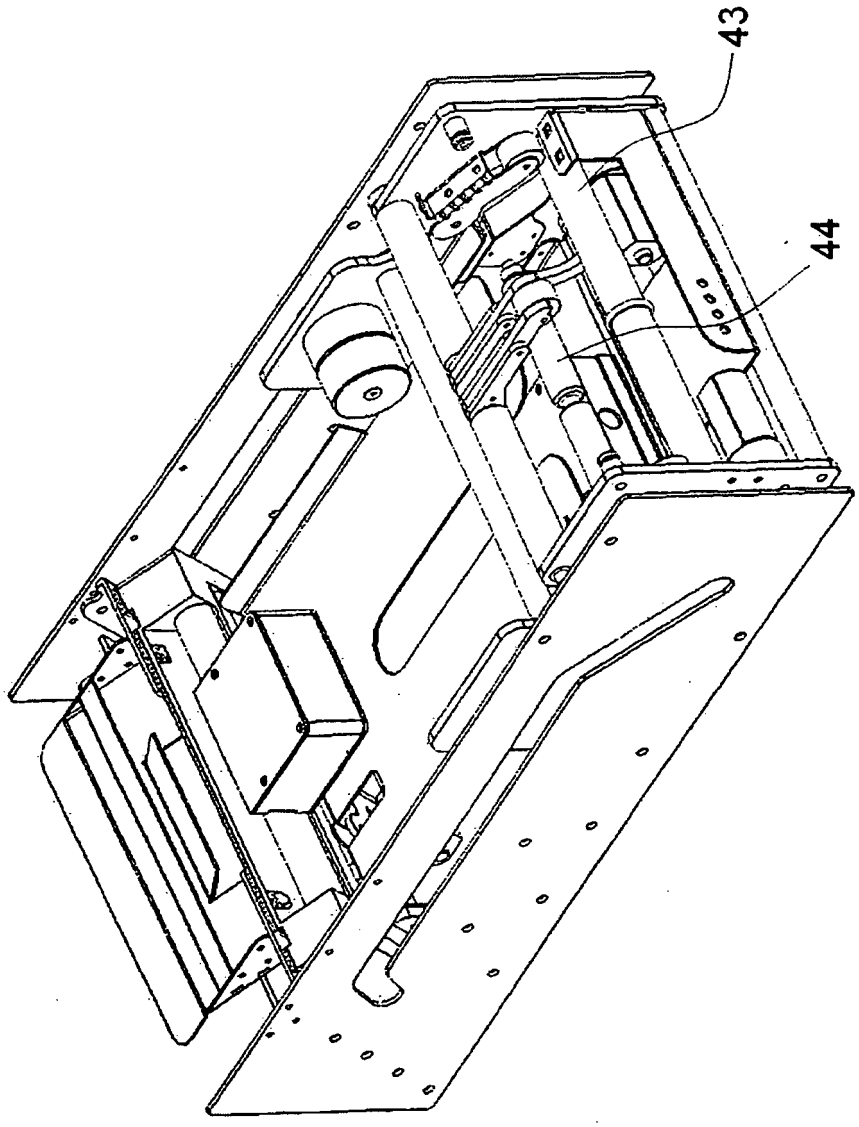


Figure-7

## REFERENCES CITED IN THE DESCRIPTION

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### Patent documents cited in the description


- US 7600755 B **[0008]**
- US 4733856 A **[0009]**