(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 562 155 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
10.08.2005 Bulletin 2005/32

(51) Int Cl.[7]: **G07D 11/00**

(21) Application number: **05425054.3**

(22) Date of filing: **07.02.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR LV MK YU

(30) Priority: **09.02.2004 IT FI20040027**

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(54) Apparatus for depositing, couting and delivering banknotes

(57) Apparatus for depositing, counting and delivering banknotes, comprising a drum (2) to which a plurality of drawers or boxes (3) are engaged each of which is able to hold a predetermined amount of banknotes (B), an entry section (10) through which the banknotes are introduced to be put into said drawers (3), at least an exit section (61) through which the banknotes are delivered and means for the rotation of said drum (2) about the respective axis (e-e), characterized in that a plurality of said drawers (3) is provided with means, for moving the banknote (B) from the outside to the inside and from the inside to the outside and with means for retaining the banknotes, which means are deactivable under control of respective deactivation means.

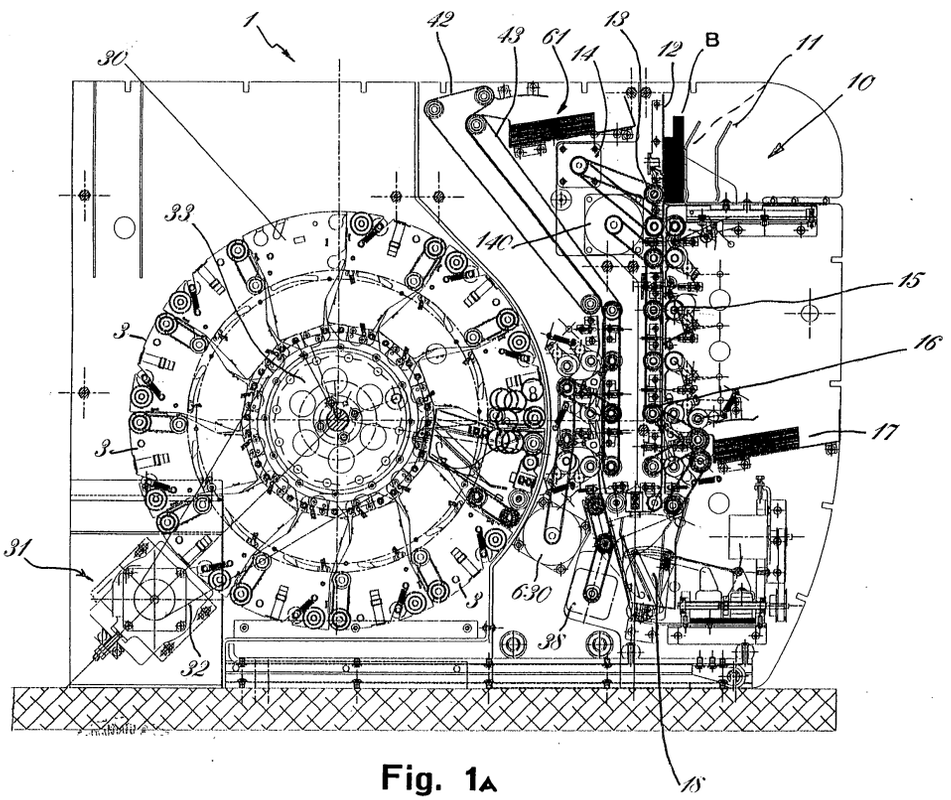

Fig. 1A

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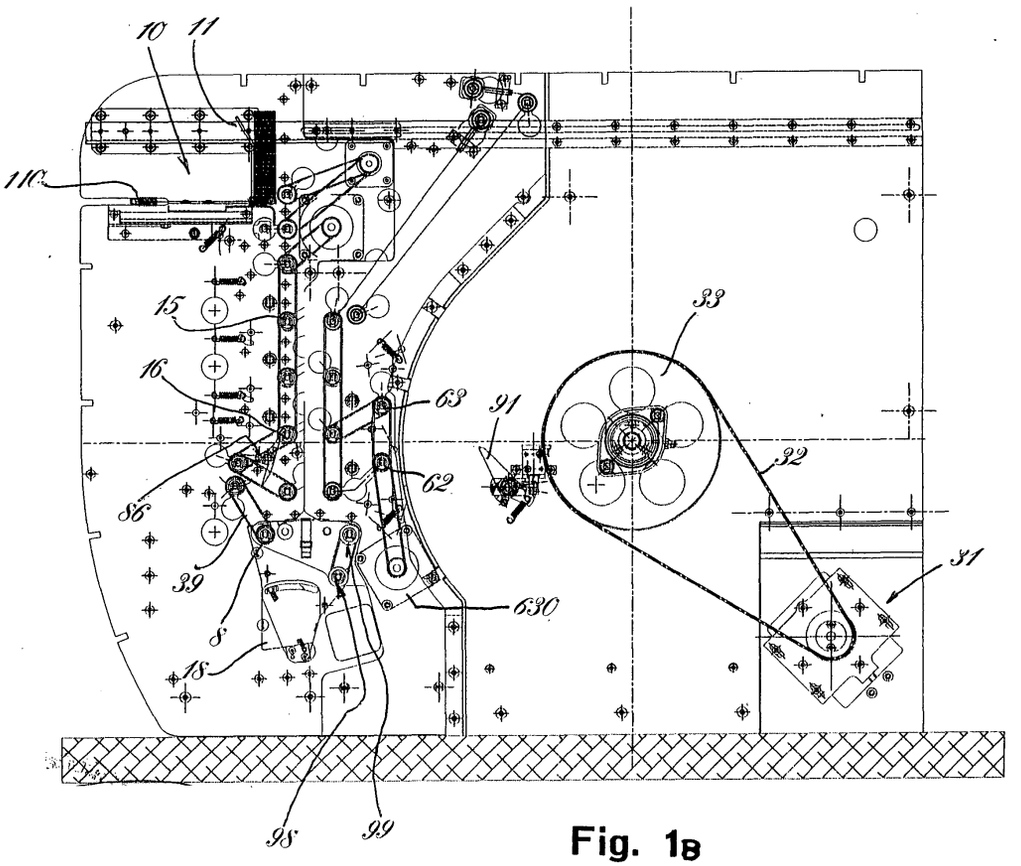

10
11
110
15
16
63
91
33
32
62
86
31
39
630
8
18
98
99

Fig. 1B

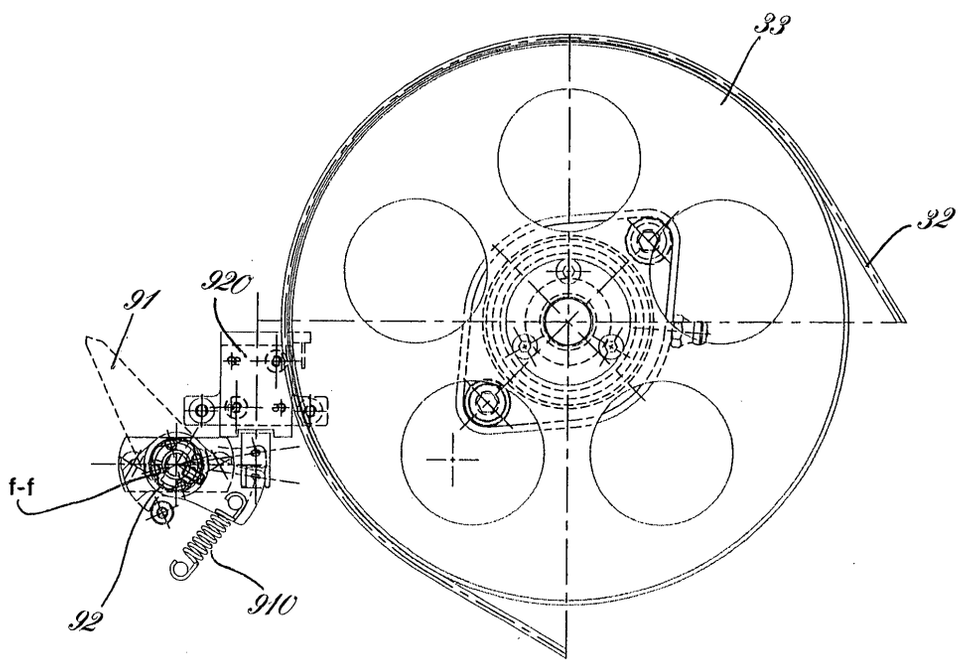

33
32
91
920
f-f
92
910

Fig. 1C

Description

[0001] The present invention refers to an apparatus for depositing, counting and delivering banknotes, especially for banks, post offices and the like.

[0002] In particular, the present invention has the object to provide an apparatus able to automatically count, storage and deliver a plurality of banknotes also of different denomination.

[0003] A further object of the present invention is to provide an apparatus which is also able to automatically carrying out banknotes authenticity tests.

[0004] The above objects have been obtained, according to the invention, by devising an apparatus having the characteristics disclosed in the claim 1. Further characteristics being set forth in the dependent claims.

[0005] One of the advantages of the present invention is that the banknotes are peeled off one at a time, counted and deposited automatically into different boxes according to the banknotes denomination; that it is possible to deliver automatically a predetermined amount of banknotes also of different denomination on request of either the cashier or the user; that it is possible to use the present apparatus also for simply counting and/or checking the autenticity of the banknotes; that an apparatus according to the invention is relatively easy to make, reliable and safe even after a prolonged service life.

[0006] These and other advantages and characteristics of the invention will be best understood by anyone skilled in the art from a reading of the following description in conjunction with the attached drawings given as a practical exemplification of the invention, but not to be considered in a limitative sense, wherein:

- Fig. 1A is a schematic side view in phantom of an apparatus according to the invention;
- Fig. 1B is a further side view of the apparatus of Fig. 1A;
- Fig. 1C shows an enlarged detail of the drawing shown in Fig. 1B;
- Fig. 2 is a schematic view in cross-section of the apparatus of Figs. 1A and 1B;
- Fig. 3 shows an enlarged detail of the drawing shown in Fig. 1A;
- Fig. 4 shows another enlarged detail of the drawing shown in Fig. 1A;
- Fig. 5 is a side view of the complex of banknote-holding boxes or drawers associated with the drum (not shown in this figure);
- Fig. 6 is a schematic plan view of the apparatus with cut-away parts to better show other parts in which, in particular, the drum is shown being associated with said boxes or drawers (not shown in this figure) and relevant driving members;
- Figs. 7 and 8 are a schematic side view and, respectively, a corresponding sectional view of a drawer for banknotes;
- Fig. 9 is a schematic plan view of the drawer shown in Figs. 7 and 8;
- Figs. 10-13 show schematically a sequence of drawer positioning steps for preparing the same drawer for the introduction, insertion and exit of the banknotes, and respectively for the return thereof to stand-by or rest condition;
- Fig. 14 is a schematic side view of the drawer-driving members;
- Fig. 15 is a block diagram relevant to the processing and control means; and
- Fig. 16 shows another enlarged detail of the drawing of Fig. 1A.

[0007] Reduced to its basic structure, and reference being made to the figures of the attached drawings, an apparatus according to the present invention comprises:

- a drum 2 having horizontal axis and supporting a plurality of radially disposed boxes or drawers 3 provided with automatic opening and closing means able to positioning each drawer into a configuration suitable for the partial or complete filling, respectively emptying thereof;
- an entry section 10 and at least an exit section 61, for the introduction and, respectively, the delivery or return of one or more banknotes;
- means suitable for counting the banknotes B and driving them towards the said boxes or drawers;
- processing and control means E able to regulate the operating steps of the apparatus.

[0008] The drum 2 is made up of a cylindrical body having a pulley 33 driven by a relevant motor 31 and connected thereto by a drive belt 32.

[0009] Fixed on the drum 2 are a plurality of boxes or drawers 3, radially disposed to cover the whole circumference of the drum. The drawers 3 are fixed to the drum 2 by suitable screw means 66 which go through relevant seats 6 provided on the drawers 3 and screwed to the body of the drum 2. In the illustrated example, there are provided twelve drawers 3 which, as best described later on, can be automatically disposed into a configuration which allows the (total or partial) filling thereof with banknotes, and into a configuration allowing the removal or delivery of the same banknotes.

[0010] Provided on the upper part of the frame of apparatus 1, is an entry section 10 for the banknotes B. The entry section 10 is provided with a drawer 11 open on top and sliding toward an abutment element 12 under the action of a spring 110, as can be seen in Fig. 1B. Upon the step for the introduction of the banknotes B, the latter are disposed vertically by the cashier and pushed, that is, compressed by the sliding support 11 against the abutment element 12.

[0011] Provided below the abutment element 12 is a first leafing roller 13, suitably motorized with a relevant

electric motor 14. The said leafing roller is intended to slip off the banknotes one at a time from the bundle disposed in the entry section 10, by directing them downwards to a plurality of pairs of driving rollers 15 (driven by a motor 140) disposed in succession along a vertical path wherein means are provided able to count the banknotes while checking for their authenticity.

[0012] The axes of said rollers 13 and 15 are parallel to the axis e-e of the drum 2.

[0013] In order to count the banknotes, photocell means 80 can be used able to check the passage of each banknote.

[0014] Checking the said autheticity is made possible by a sensor 88 of magnetic type able to detect the identification code in the magnetic wire or band of each banknote; in practice, the sensor is a decoder of the magnetic wire held by the banknotes B.

[0015] Provided along the said banknotes' vertical path is a pair of motorized rollers 16 disposed in correspondence of a diverter 86 able to divert the incoming banknote outwardly of the apparatus (to the right in Figs. 1A, 4 and 16), that is, toward a first exit section 17, to which the banknotes can be fed after either a command by the processing means E or a request by the user. Best visible in Fig. 16 is the diverter 86 represented in both solid and dashed lines. In the representation with solid line, the diverter 86 turns a straight portion thereof towards the vertical path followed by the banknotes, which portion does not interfere with the banknotes as they transit along said path; in the representation with dashed line, the diverter 86 is in the interference position, that is, it is rotated (clockwise with respect to the position of non-interference, in relation to the drawing orientation) so that a curved portion thereof results inserted below the rollers 16 and is able to direct the banknote toward the roller 87 which takes the same banknote to the exit station 17.

[0016] In practice, the first exit section 17 can be used either automatically by the apparatus, in order to deliver thereto the banknotes recognized as non authentic, or upon a request by the user, when only a count and/or a check of the banknotes is carried out, without the successive deposit thereof in the drawers 3.

[0017] Provided downstream of rollers 15, in correspondence of the end of the vertical path followed by the banknotes, is a drawer 18, for the temporary storage of the banknotes, also said escrow drawer.

[0018] The escrow drawer 18 has a conformation similar to drawers 3 which the drum 2 is equipped with and, for this reason, the drawers 3 and 18 will be described later on in conjunction with each other. In particular, the drawers 3 and 18 have a box-like shape open in correspondence of a base 5 and are provided with an inner strap or rammer pivoted to an axis Z in correspondence of the base 56 opposite to the open base 5. In particular, the sad strap comprises a support body 4 with "L" profile and hinged to said axis Z, and a lamina 44 associated and solid with said body 4 as well, a flexible and elastically yielding element 48 being fixed on the lamina 44. Provided on the strap's body 4 is a pivot 45, which slides within a slot having curved development 46, and a spring 47 acting on said pivot. The said slot 46 is located on a side of the drawer 3 and exhibits a concavity facing the axis of rotation e-e of the drum. The said axis Z is parallel to the axis e-e of the drum 2. The action of spring 47 tends to maintain the strap in a position which will also said of drawer closing, that is, in a condition in which the strap, that is its lamina 44, pushes, by means of the flexible element 48, the banknotes possibly held on a side 57 of the drawer 3. In practice, the strap can rotate inside the drawer 3 (or 18) moving either to the inner face of side 57 when subjected only to the thrust of spring 47, or to the inner face of the opposite side 58 when, owing to the action of a lever 91 (best described later on), the internal force of the spring is overcome.

[0019] Since the said base 56 has a dimension smaller than the open side 5, each drawer has a substantially wedge-like profile which facilitates its radial positioning on the drum 2. In addition, the drawers are fixed on the drum with their major side parallel to the axis e-e of the drum 2. For this reason, the banknotes are collected within the drawers with their major side parallel to the axis e-e and disposed radially about the drum 2.

[0020] Provided on the drawers 3, 18 are means which allow the orderly insertion and removal of the banknotes.

[0021] In practice, the means allowing the insertion of the banknotes comprise a rubber-coated roller 8 and an indented roller 9 which are disposed parallel to the strap's hinge axis Z, in proximity of the open side 5 of the drawer, on the side 58 (on the right in Figs. 7 and 8). Acting on the two ends of the sahft of roller 9 are two springs 40 that keep the roller 9 in contact with the roller 8. On one end of the shaft of roller 8 a wheel 7 is keyed able to interact, as described below, with a relevant driving wheel 70 which drives it into rotation when required. In practice, the motion applied on the wheel 7 is transmitted to the roller 8 and, as a consequence, to the roller 9 which is contact therewith.

[0022] For the withdrawal or delivery of the banknotes, there is provided - on each drawer in proximity of the open side 5 but on opposite side with respect to said rollers 8 and 9 - a pair of rollers 99 and 97 which are in contact with each other and parallel to said rollers 8 and 9. In particular, as best visible in Fig. 9, the surface of roller 99 is grooved, whereas that of roller 97 is smooth. Below the roller 99 and parallel to the latter, another roller 98 is provided connected thereto via one or more belts 96. When the strap is in the drawer's closing position, the flexible element 48 of the lamina 44 is pushed into abutment onto the banknotes possibly held in the drawer. In this configuration, the banknote closer to the side 57 of the drawer (on the left in Fig. 8) is in direct contact with the lower roller 98. The proper rotation (in anticlockwise direction with reference to Fig. 8) will thus cause the translation of the banknote which is

closer to the open side 5 of the drawer, that is, the passing thereof outside through the two exit rollers 99 and 97.

[0023] Keyed on one end of roller 99, in a manner similar to what is provided for roller 8, is a wheel 77 able to interact, as best described below, with a relevant driving wheel 71 to be driven into rotation when required. In practice, the motion applied on the wheel 77 is transmitted to the roller 99 and, as a consequence, to the roller 98 which is in contact therewith via the belt 96.

[0024] As previously mentioned, the said escrow drawer 18 is disposed at the end of the vertical path followed by the banknotes upon the initial stage, with the open side 5 facing upwards. As best visible in Fig. 4, hinged to the pivot of said drawer 18 is one end of a connecting rod 35, whose opposite end is hinged to a carriage 36 movable along the stem 37 disposed perpendicular to the hinge axis of the relevant strap. In practice, the sliding of the carriage 36 is cause for the displacement of the strap inside the drawer 18, that is, the positioning of the drawer into an opening or closing configuration. With reference to Fig. 4, the drawer is open when the strap is kept on the right side, whereas the drawer is closed with the strap on the left side.

[0025] The entry section of the escrow drawer 18, made up of the two rollers 8 and 9, is shown on the right in Fig. 4, whereas the exit section, which comprises the rollers 99, 97 and 98 is disposed in the left.

[0026] The roller 8 which receives the motion is connected via a belt 39 to a relevant driving member (not shown). In this way, the two rollers 8 and 9 which, as indicated above are in contact with each other through the respective surfaces, define the entry section for the escrow drawer 18, thereby allowing the same drawer to receive banknotes, with the strap 4 being in opening position.

[0027] The lower roller 98 of the exit section is connected, via a belt 34, to a motor 38 that drives it into motion. The rotation of the roller 98 determines the consequent rotation of the roller 99 connected thereto via the belt 96. In practice, the activation of the motor 38 causes the exit of banknotes from the escrow drawer 18.

[0028] From the escrow drawer 18, the banknotes may follow two paths: a first path leading to the second section 61 located on top of the apparatus 1 for exiting therefrom, and a second path along which the banknotes are introduced into the drawers 3 supported by the drum 2.

[0029] In particular, as best viewable in Fig. 16, the banknotes leaving the escrow drawer go through an upwardly-facing guide 82 to pass, afterwards, between two rollers 83 in correspondence of which a diverter 64 is provided - the latter being shown both in solid line (corresponding to the position of non interference) and in dashed line (corresponding to the interference position). When the diverter 64 is in the position of non interference, the banknotes are directed upwards through the rollers 89 to make them going out from the upper exit 61.

[0030] On the contrary, when the diverter 64 intercepts the banknotes, it directs them towards the motor 60-driven rollers 62 which define the station for the insertion of the banknotes into the drawers 3.

[0031] Provided above the rollers 62 of the station for the insertion of the banknotes, is a further pair of motorized rollers 63 which define the station for the withdrawal of the banknotes.

[0032] Provided in proximity of the rollers 63, on the right side thereof with reference to the drawing of Fig. 4, is a diverter 65 being shown both in solid line (corresponding to the position of non interference) and in dashed line (corresponding to the interference position). When the diverter 65 is in the position of non-interference, it allows the banknotes coming from the escrow drawer 18 to be directed upwards to make them going out from the upper exit 61. When the diverter is in the interference position, it directs the banknotes coming from the rollers 63 toward the said station 61. In particular, above the diverter 65 there is provided a guide 41 downstream of which (that is, thereabove) two paired belt conveyors 42 and 43 are provided which take the banknotes to the exit station 61 while retaining them therein during the transport.

[0033] As previously mentioned, the rollers 62 defines the station for inserting the banknotes inside the drawers 3, while the rollers 63 define the withdrawal station. In correspondence of such stations, drawers-activating means are provided able to interact with the elements 7, 8, 77, 99 associated with the previously described drawers.

[0034] In particular, with reference to Figs. 1C, 10, 11, 12, 13, a lever 91 is provided which is perpendicularly fitted on a rotating shaft 92 supported by a fixed body 920 and whose axis f-f is parallel to the axis e-e of the drum 2. The lever 91, which is associated with a corresponding actuator (not shown) able to overcome the resistance of a respective return spring 910, is disposed at a fixed distance from the axis e-e of the drum 2, so as to be able to intercept, if proprly rotated, the pivot 45 exhibited by the strap of the drawers, when the latter rotate because supported by the drum 2 driven into rotation. In practice, the drawer to be partially or completely filled is moved, by rotating the drum 2, close to the loading station 62. In the Figs. 10 and 11, the lever 91 is shown rotated downwardly so as to define an angle (indicated by α) allowing the same lever to intercept the pivot 45 of the drawer 3. The interception of the pivot 45 causes the displacement of the strap of drawer 3 toward the so-called opening position, that is, to the position shown on the right in Fig. 8, in which the end 44 of the strap is disposed below the rollers 7 and 8. In this configuration, the banknotes can be introduced into the drawer 3.

[0035] On the contrary, as shown in Figs. 12 and 13, when the lever is rotated upwards, so as to define an angle δ larger than the angle α, the pivot 45 can no longer be intercepted by the lever 91 and the drawer remains closed, that is, the strap therein results disposed under

the exit rollers 97 and 99 due to the action exerted on the same strap by the spring 47.

[0036] In addition, as best described also in Figs. 2 and 14, the frame of the apparatus 1 has associated therewith the members for operating the said elements 7, 8, 77, 99 of drawers 3, indicated in the whole by numeral 95.

[0037] Fixed to the apparatus 1 is a support 100 with which the said members 95 are associated. The said members 95 comprise a motor 93 which is engaged to the support 100 and whose driving shaft 74 drives into motion a pulley 73 via a belt 94. Mounted on the pulley 73 are wheels 70, 71 and 72 meshing with each other and disposed along a diameter of the pulley 73. The members 95, in addition, comprise a second motor 101 which, via a belt 102, can drive the shaft 103 into rotation, the said central wheel 72 being keyed on the said shaft. In practice, the first motor 93 can cause the pulley 73 to rotate, while the second motor 101 is able to rotate the central wheel 72 as well as the two side wheels 70 and 71 as they are driven by the same wheel 72.

[0038] In Fig. 10, a drawer 3 is shown approaching the loading station 62 to receive the banknotes; in this step, the lever 91 is activated so as to be able to intercept the pivot 45 exhibited by the drawer 3.

[0039] In Fig. 11, the drawer 3 has arrived in correspondence of rollers 62, and the lever 91, by interacting with the pivot 45, keeps the drawer 3 into the opening configuration; the motor 93 has caused the pulley 73 to rotate to move the wheel 70 (at the bottom in the drawing) in meshing relationship with the wheel 7 exhibited by the roller 8 of drawer 3. In this way, the banknotes which go through the rollers 62 are dragged along by the rollers 8 and 9 (driven by the wheel 70) into the drawer 3. Once the loading of the drawer is completed, the same drawer is displaced to a stand-by position, as illustrated in Fig. 13, in which the lever 91 is inactive and the banknotes are retained by the relevant strap also when the drawer 3 is in overturned position, that is, with the open side 5 turned downwardly.

[0040] Shown in Fig. 12 is a configuration for the withdrawal of banknotes. In this configuration, the drawer 3 has come in correspondence of rollers 63, and the lever 91, which no longer interacts with the pivot 45, keeps the drawer in closing configuration; the motor 93 has rotated the pulley 73 to bring the wheel 72 (shown below in the drawing) into meshing engagement with the wheel 77 borne by the roller 99 of drawer 3. In this way, the banknotes that are inside the drawer are dragged along outwardly, firstly by the roller 98 and successively by the two rollers 99 and 97, to be then picked up and dragged along by the rollers 63. Once the withdrawal form the drawer 3 is completed, the latter is moved to a stand-by position like the one shown in Fig. 13.

[0041] Advantageously, a drawer designated by numeral 30 is in fact a "dummy drawer", that is, an empty drawer which is not provided with means for the introduction and delivery of banknotes. The presence of such drawer 30 is intended for moving, when the apparatus is inoperative, the dummy drawer to the position normally used for the entry and exit of the banknotes into/from the drawers. The purpose of such solution is connected to security; in fact, since the region of deposit and withdrawal of the banknotes into/from the drawers is not protected like the remaining parts of the walls of apparatus 1 (whose reinforced external structure is indicated with 108), and the rotation of the drum 2 is programmed for being blocked in non-use conditions, any forcing attempt results extremely difficult.

[0042] Shown in the block diagram of Fig. 15 are the possible connections between the programmable unit E and the members, controlled and operated by the same unit. The said unit E, intended for operating and controlling the elements above described and shown in the accompanying drawings, is of a type well known to those skilled in the industrial automation and, therefore, will not be described in greater detail.

[0043] Upon the operation step of the apparatus 1 according to the present invention, the operator puts the banknotes to be treated on the entry station 10 from which they are moved one at a time downwardly along the said vertical path allowing them to be counted and checked for authenticity (by the sensor 88) by sending signals to the processing and control means E. The banknotes B can also be of different denomination as the apparatus is able to recognize their value by the sensor 88. If the sensor 88 identifies a banknote as counterfeit, or finds it of uncertain validity, the diverter is activated to direct the banknote to the first unloading station 17. At this point, the operator may subject the banknote to a new check by either re-inserting it into the apparatus, or inspecting it personally.

[0044] The banknotes identified as good are sent to the escrow drawer 18 and, when the bundle of banknotes has been interely processed, the apparatus shows a value on the display D (schematically represented together with a keyboard T in the block diagram of Fig. 15) relative to the number of banknotes being counted. If the displayed number corresponds to the value held to be correct, the banknotes, under a command by the operator, are fed to the drawers-loading station 62, otherwise they are fed to the upper exit station 61. In the former case, the processing means E activate both the diverter 64, which delivers the banknotes to the rollers 62, and the motor-driven members intended for operating the insertion of banknotes into the drawer 3; in the latter case, the banknotes go directly upwards by passing between the two paired conveyors 42 and 43.

[0045] In a similar way, when the banknotes are taken out of the drawers, the processing means provide for activating the diverter 65 to send the banknotes to the exit 61.

[0046] Upon the step of introducing the banknotes, any type of banknote is directed to a predetermined drawer which depends on the banknote's denomination. In practice, each drawer 3 will be filled progressively with

banknotes of the same denomination and, once filled the drawer completely, another empty drawer will be used to receive further banknotes of the same denomination.

[0047] Similarly, upon the withdrawal step, the processing means E of the apparatus will provide for emptying firstly the drawers last filled - by seeking, in practice, to maintain the minimum number of occupied drawers.

[0048] The choice of the drawer to be either filled or emptied out will be operated by the processing means E, the latter being provided with a memory able to store the positions of the drawers 3 on the drum 2, together with the type and number of banknotes held therein.

[0049] Moreover, the construction details may vary in any equivalent way as far as the shape, dimensions, elements disposition, nature of the used materials are concerned, without nevertheless departing from the scope of the adopted solution idea and, thereby, remaining within the limits of the protection granted to the present patent.

Claims

1. Apparatus for depositing, counting and delivering banknotes, comprising a drum (2) to which a plurality of drawers or boxes (3) are engaged each of which is able to hold a predetermined amount of banknotes (B), an entry section (10) through which the banknotes are introduced to be put into said drawers (3), at least an exit section (61) through which the banknotes are delivered and means for the rotation of said drum (2) about the respective axis (e-e), **characterized in that** a plurality of said drawers (3) is provided with means for moving the banknote (B) from the outside to the inside and from the inside to the outside and with means for retaining the banknotes, which means are deactivable under control of respective deactivation means.

2. Apparatus according to claim 1, **characterized in that** the said means for moving the banknotes (B) inwardly of each drawer (3) comprise a first pair of rollers (8, 9) disposed in proximity of an open base (5) of said drawer (3) with the respective axes parallel to the axis of rotation (e-e) of the drum (2), one (9) of said rollers (8, 9) being provided with a portion (7) to be engaged by a corresponding driving member (70), and **in that** the said means for moving the banknotes (B) to the outside of each drawer (3) comprise a second pair of rollers (99, 97) disposed in proximity of said open base (5) with the respective axes parallel to the axis of rotation (e-e) of the drum (2), one (99) of said rollers (99, 97) being provided with a portion (77) to be engaged by a corresponding driving member (71).

3. Apparatus according to claim 1, **characterized in that** the said means for retaining the banknotes inside each drawer comprise a strap (4, 44) hinged to an axis (Z) parallel to the axis (e-e) of the drum (2) in correspondence of a base (56) of the drawer (3) opposite to the open base (5) thereof: said strap (4, 44) being provided with a portion (45) to be engaged by a corresponding actuator (91; 35) which drives it into rotation about said axis (Z) by winning the resistance of corresponding means (47) which impose the positioning of the banknotes in retention condition.

4. Apparatus according to claim 3, **characterized in that** the said means (47) are elastic means.

5. Apparatus according to claim 2, **characterized in that** the said driving members (70, 71), able to engage the said portion (7) and respectively the said portion (77), are made up of a pair of wheels (70, 71) disposed on a support (73) and driven into rotation by a driving wheel (72).

6. Apparatus according to claim 5, **characterized in that** the said support (73) consists of a pulley driven into rotation by a motor (93) so as to be rotated to allow either the interaction of the wheel (70) with the portion (7) for causing the roller (9) to move, or the interaction of the wheel (71) with the portion (77) for moving the roller (99).

7. Apparatus according to claim 2, **characterized in that** one of said rollers (8, 9) for dragging along the banknotes inside the drawer is kept in contact with the other roller (9) via relevant elastic means (40).

8. Apparatus according to claim 2, **characterized in that** the means for dragging along the banknotes (B) outwardly of each drawer (3) comprise the said pair of rollers (99, 97) and a third roller (98) parallel to the above rollers and connected to one (99) of them to either receive the motion therefrom or transmit the motion thereto: said third roller (98) being disposed in a region of the drawer interested by said banknotes-retaining means (4, 44), so as to result in contact with the same banknotes when these are retained by the said means (4, 44) and thereby determining, when driven into rotation, the displacement of the banknote, which is closer to the same roller, outside of the drawer.

9. Apparatus according to one or more preceding claims, **characterized in that** it comprises a drawer (18) for the temporary deposit of the banknotes.

10. Apparatus according to one or more preceding claims, **characterized in that** it comprises means (80) able to count the banknotes and including pho-

tocell devices.

11. Apparatus according to one or more preceding claims, **characterized in that** it comprises means (88) able to check for the authenticity of the banknotes and including a decoder of magnetic band.

12. Apparatus according to claim 11, **characterized in that** it comprises an additional exit station (17) from which the banknotes that do not exhibit certain characteristics of authenticity are rejected.

13. Apparatus according to claim 9, **characterized in that** downstream of said drawer (18) a diverter device (64) is provided which, upon the receiving of a command, takes up either a first or a second configuration to direct the banknotes respectively towards the said exit section (61) or towards the said drawers (3).

14. Apparatus according to claim 3, **characterized in that** the said actuator comprises a lever (91) able to be rotated to interact, under control, with said portion (45) of the strap.

15. Apparatus according to claim 3, **characterized in that** the said actuator comprises a connecting rod (35) which links a carriage (36) and said strap's portion (45).

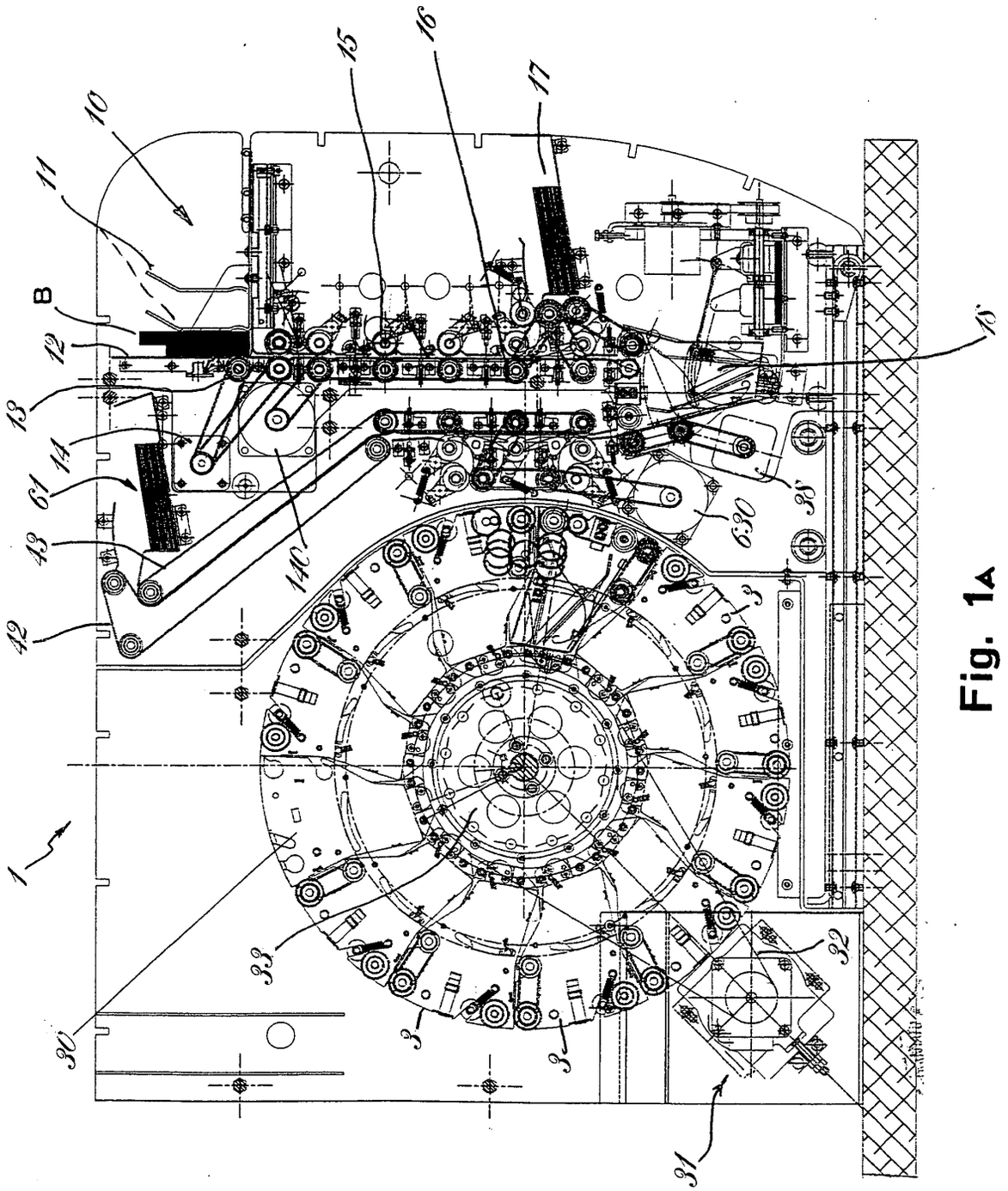


Fig. 1A

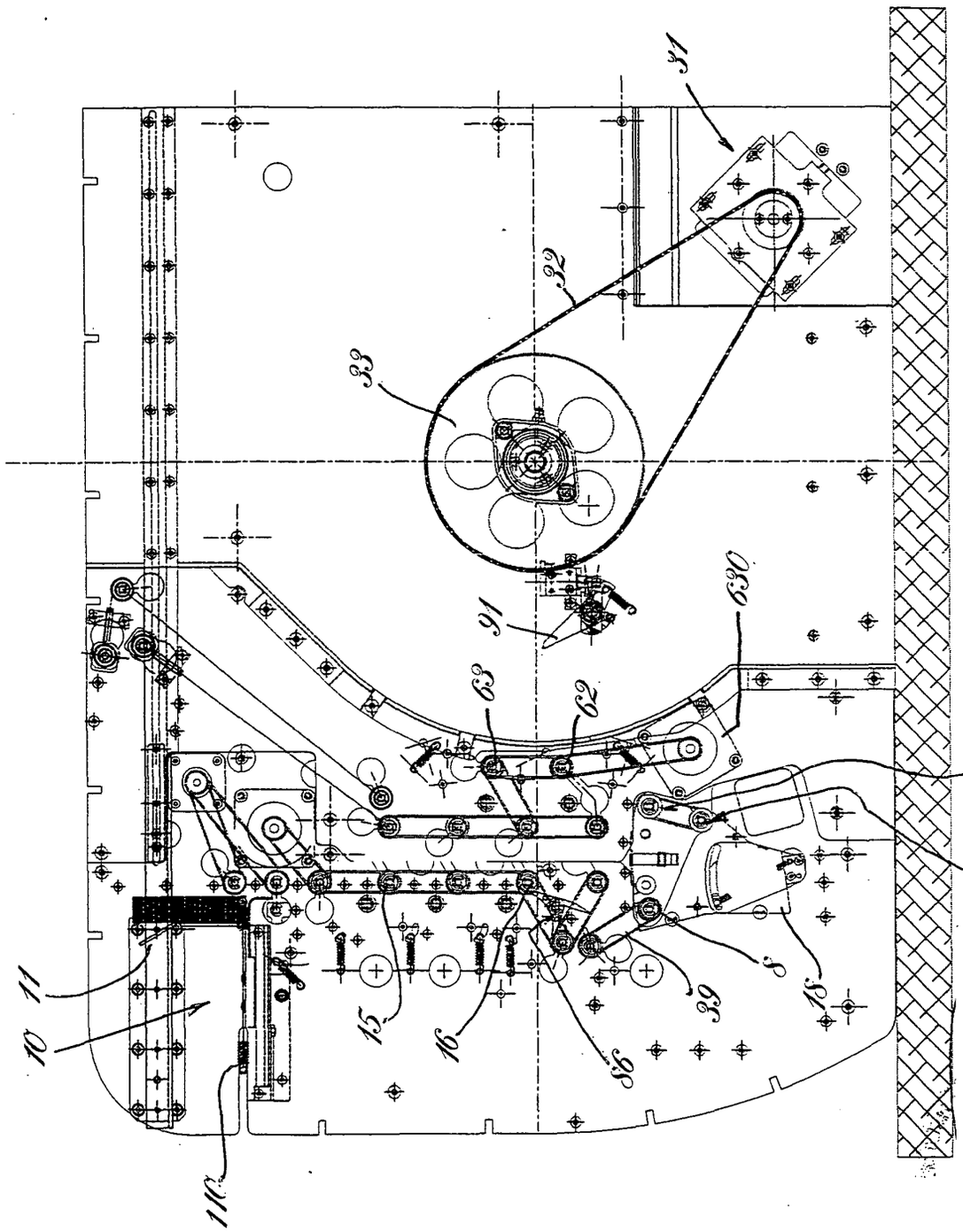


Fig. 1B

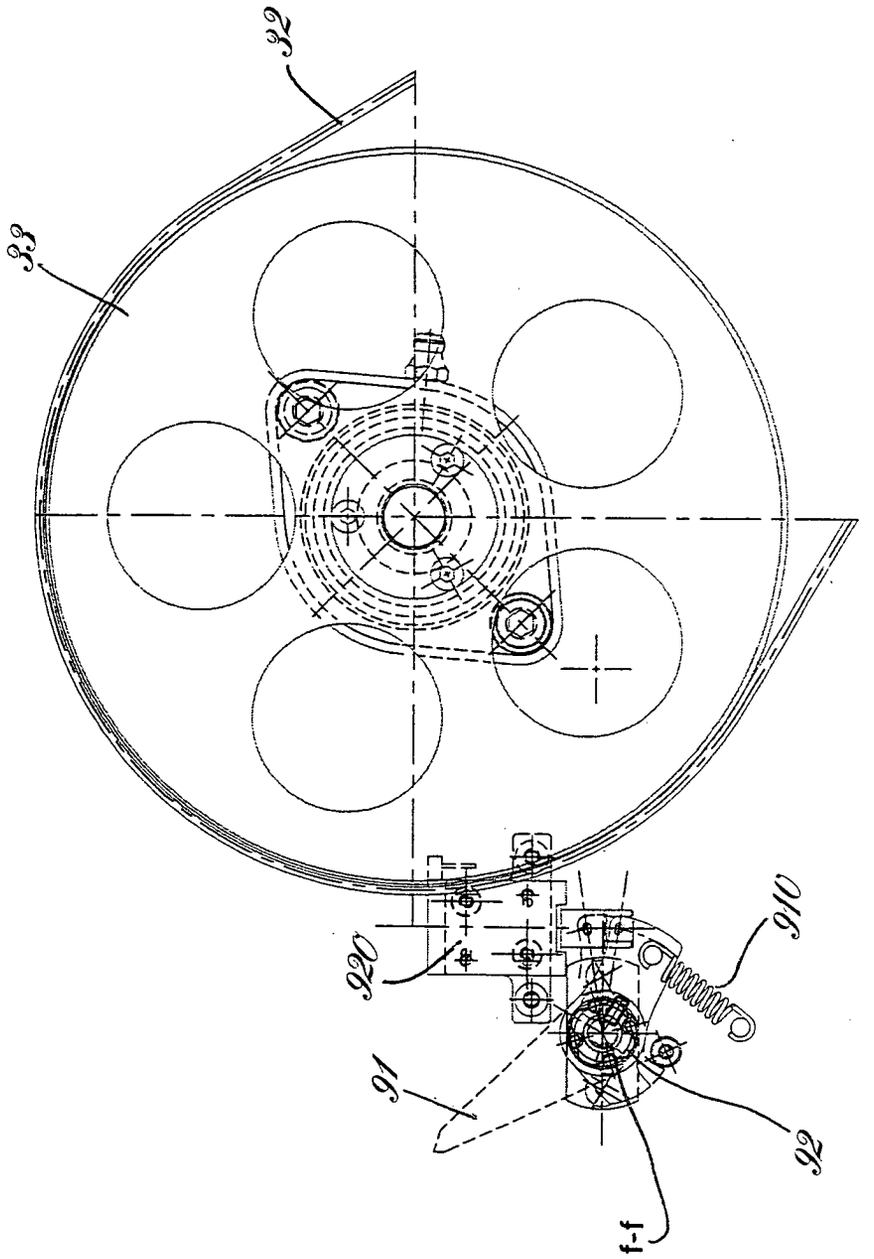


Fig. 1c

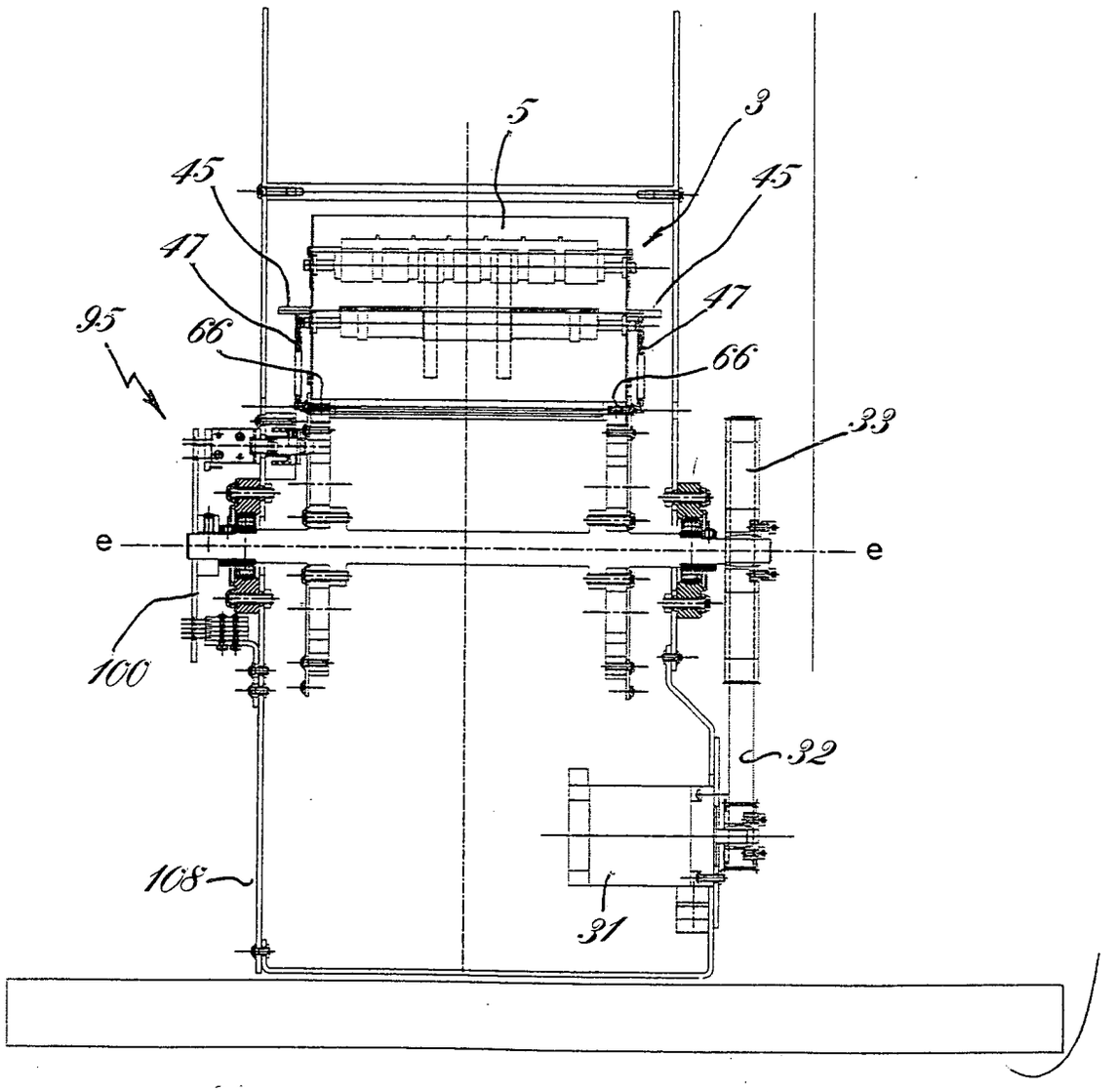


Fig. 2

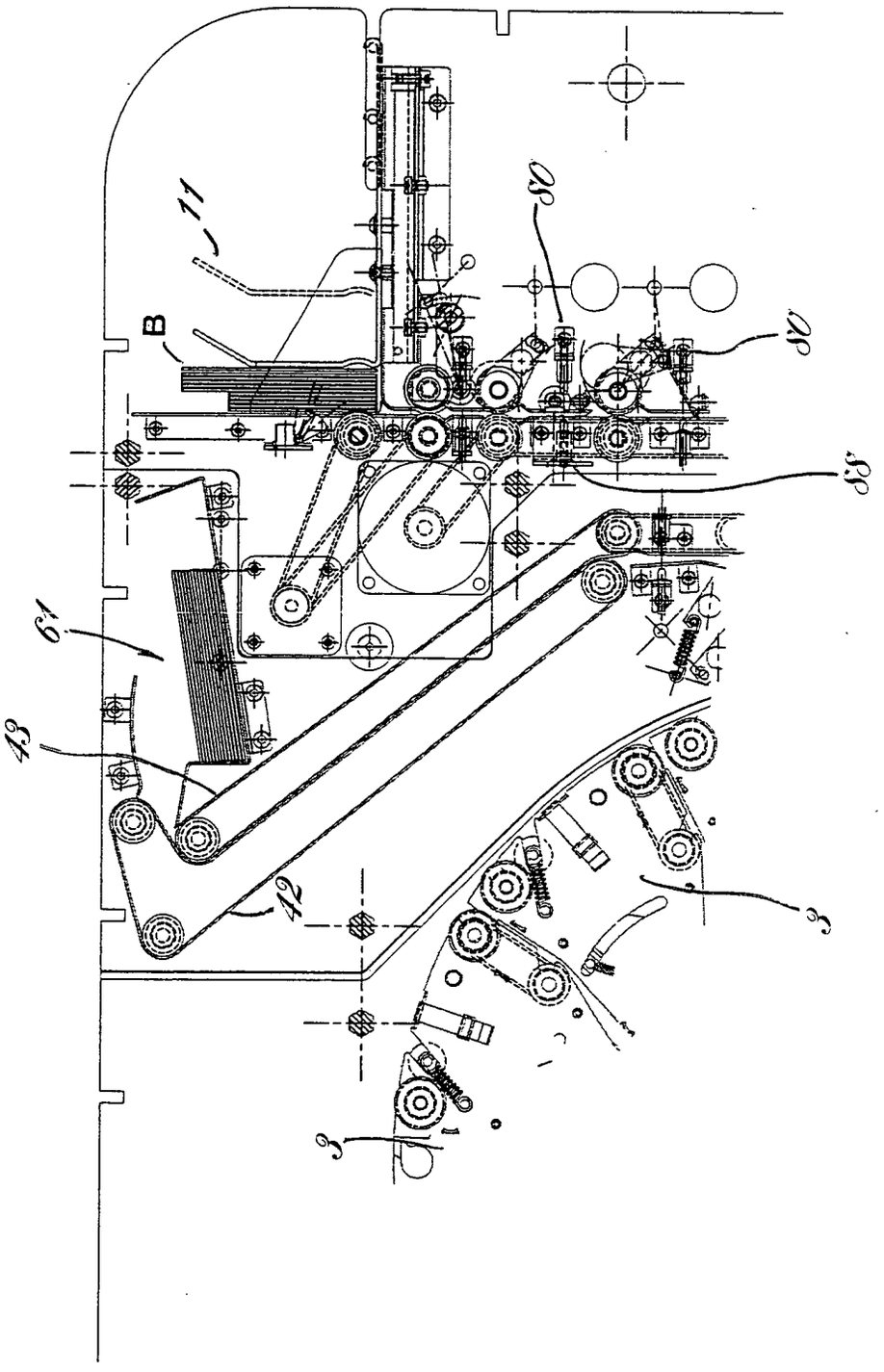


Fig. 3

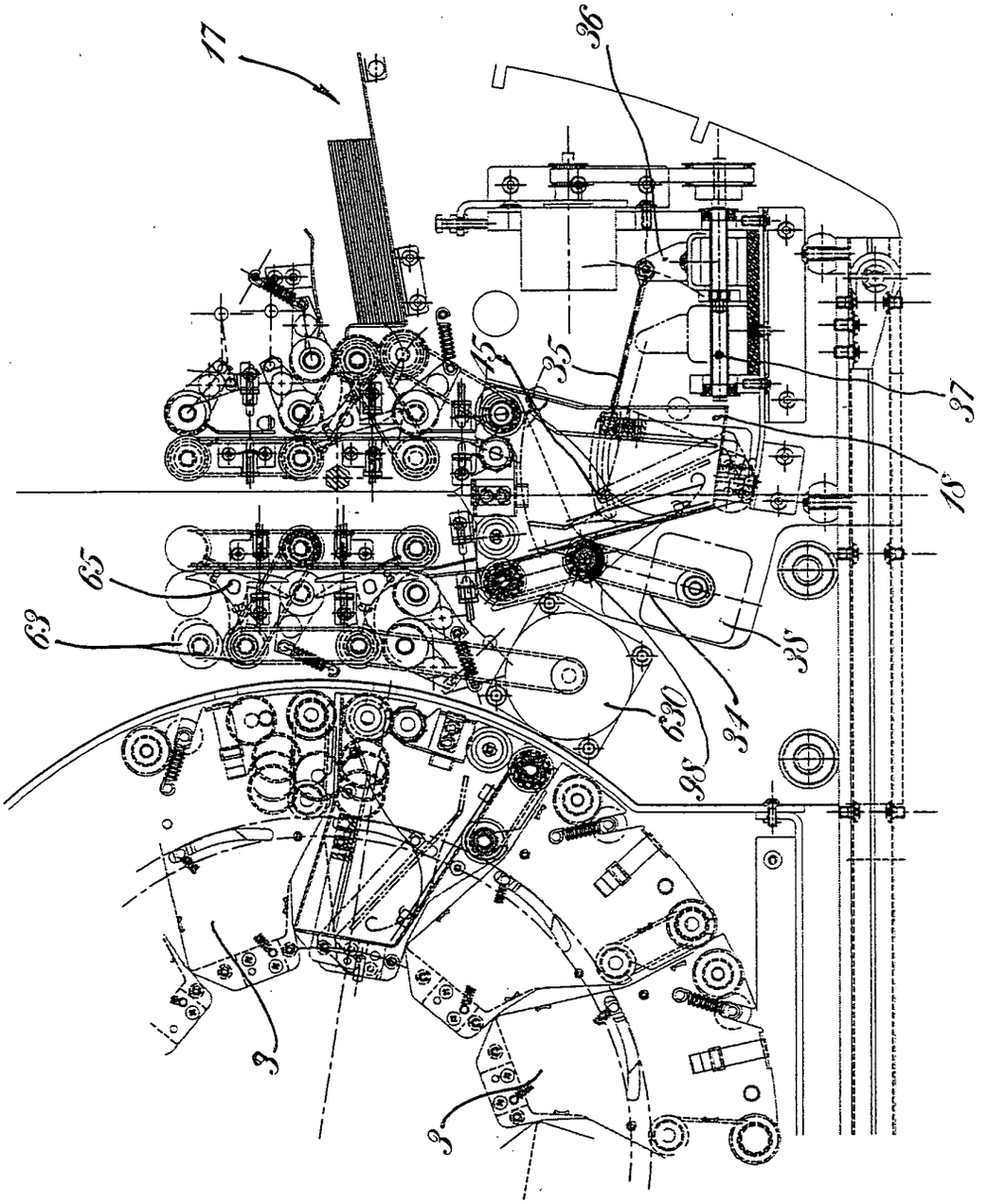


Fig. 4

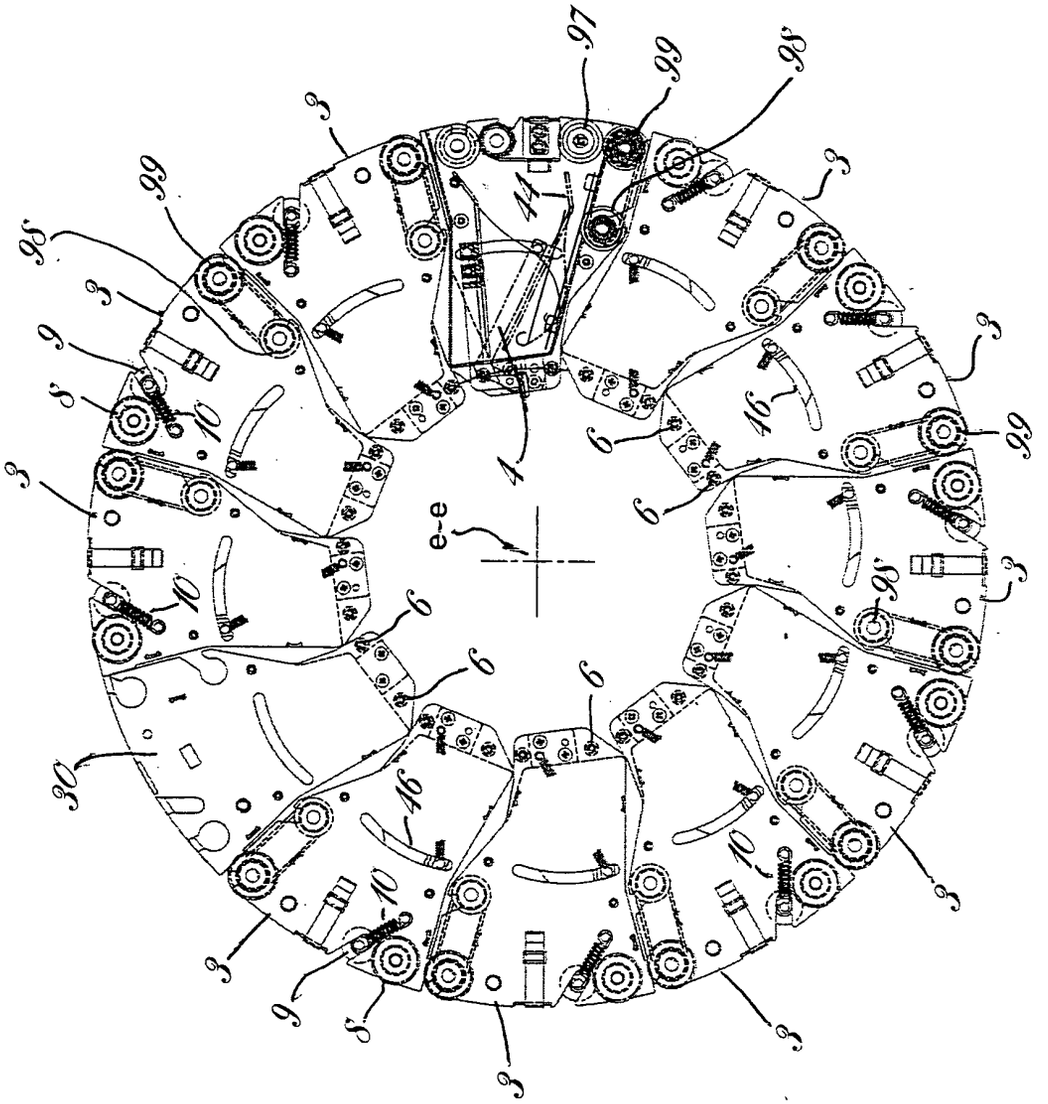


Fig. 5

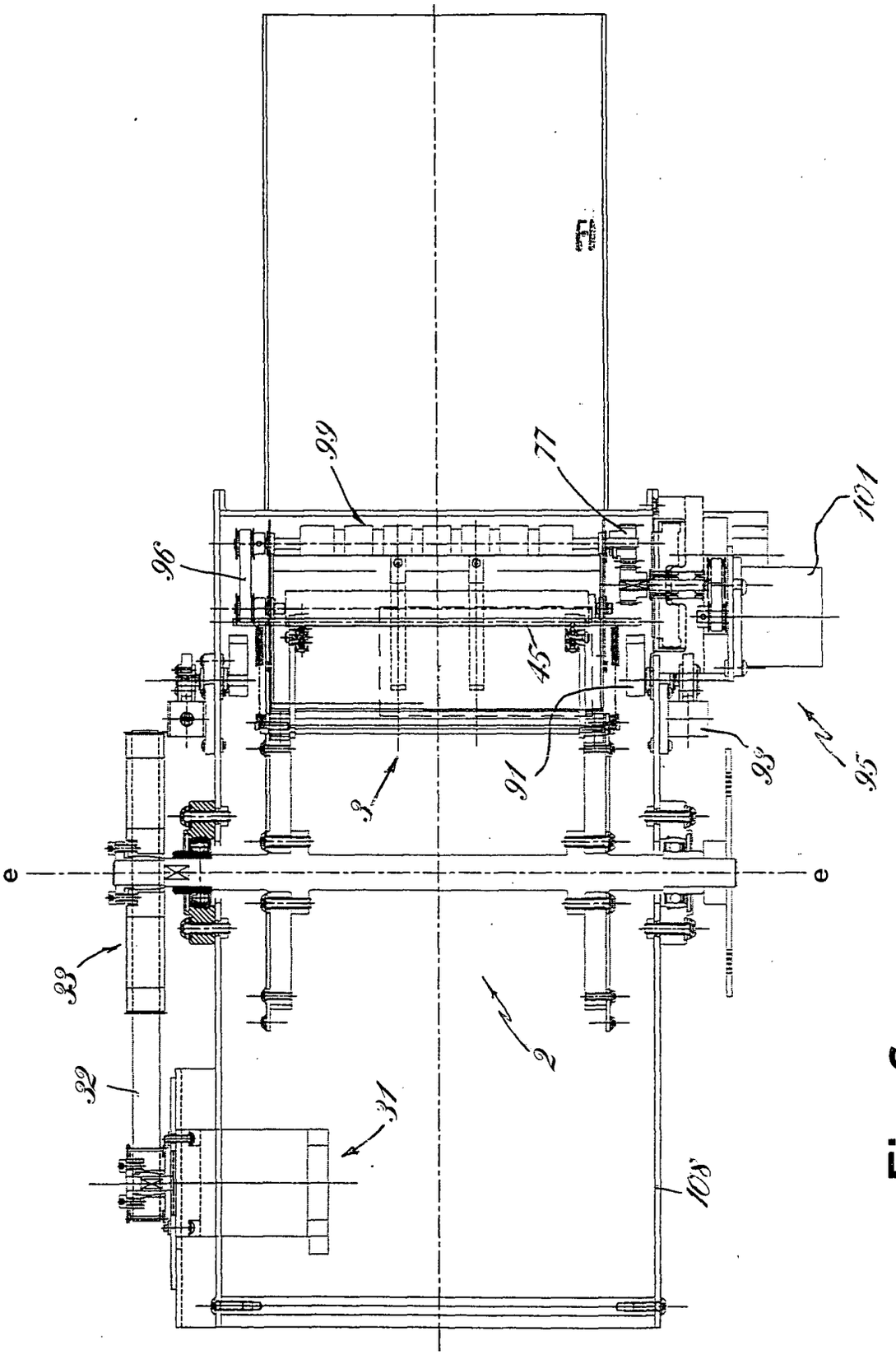


Fig. 6

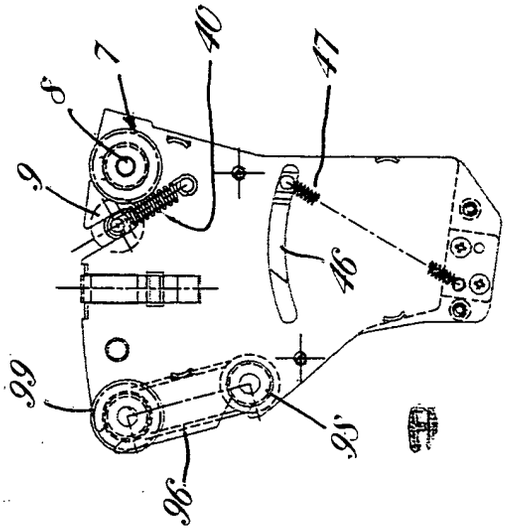


Fig. 7

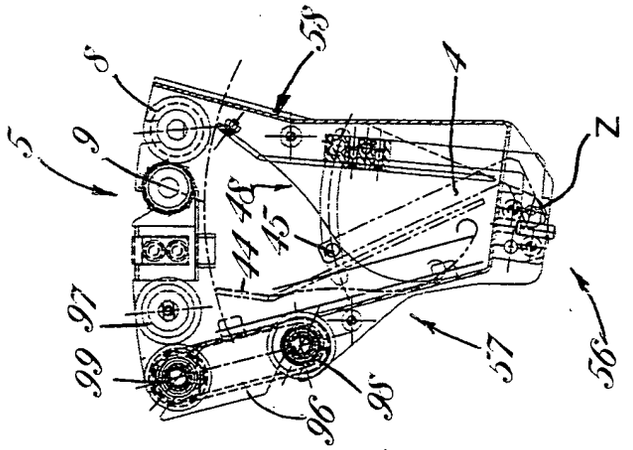


Fig. 8

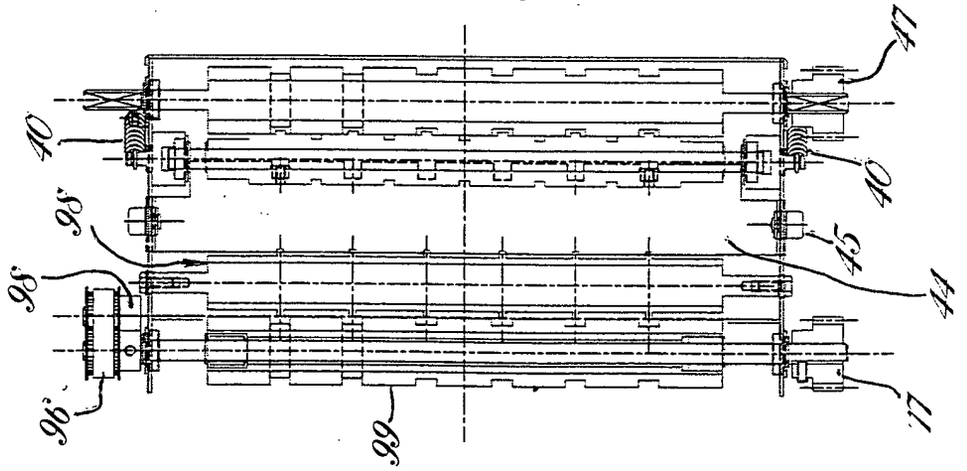


Fig. 9

Fig. 13

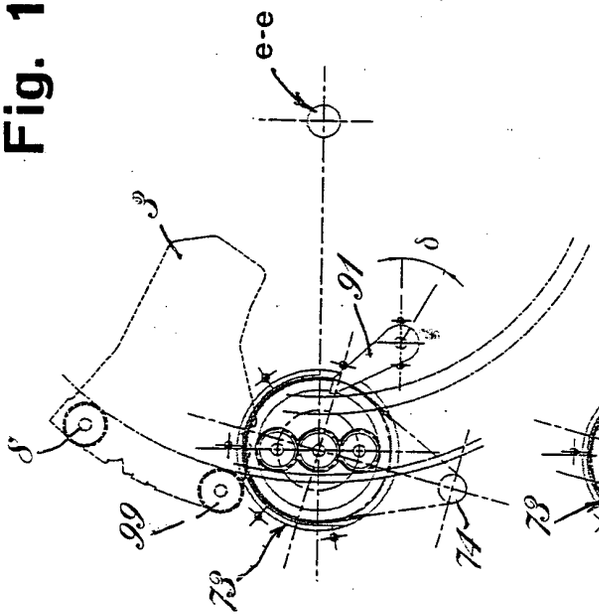


Fig. 10

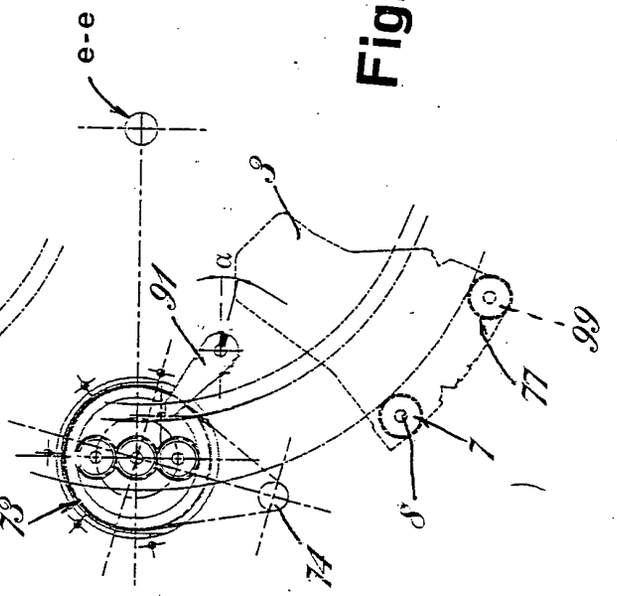


Fig. 12

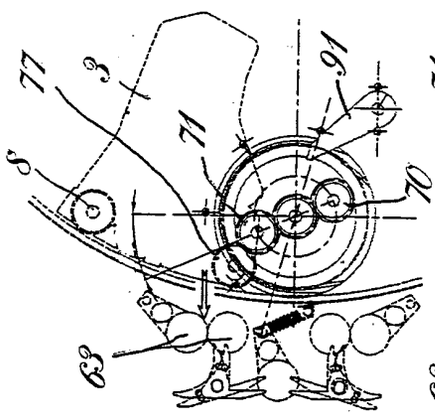
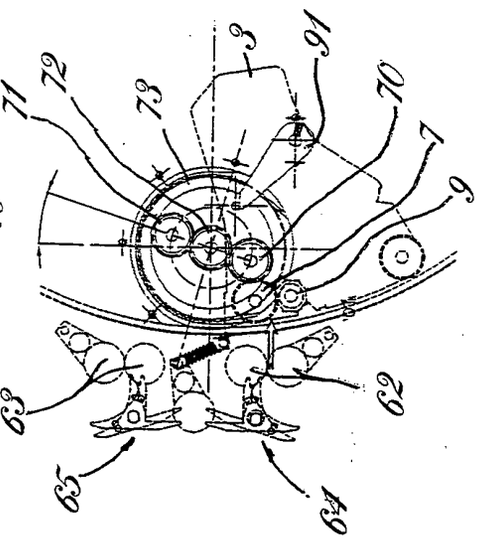


Fig. 11



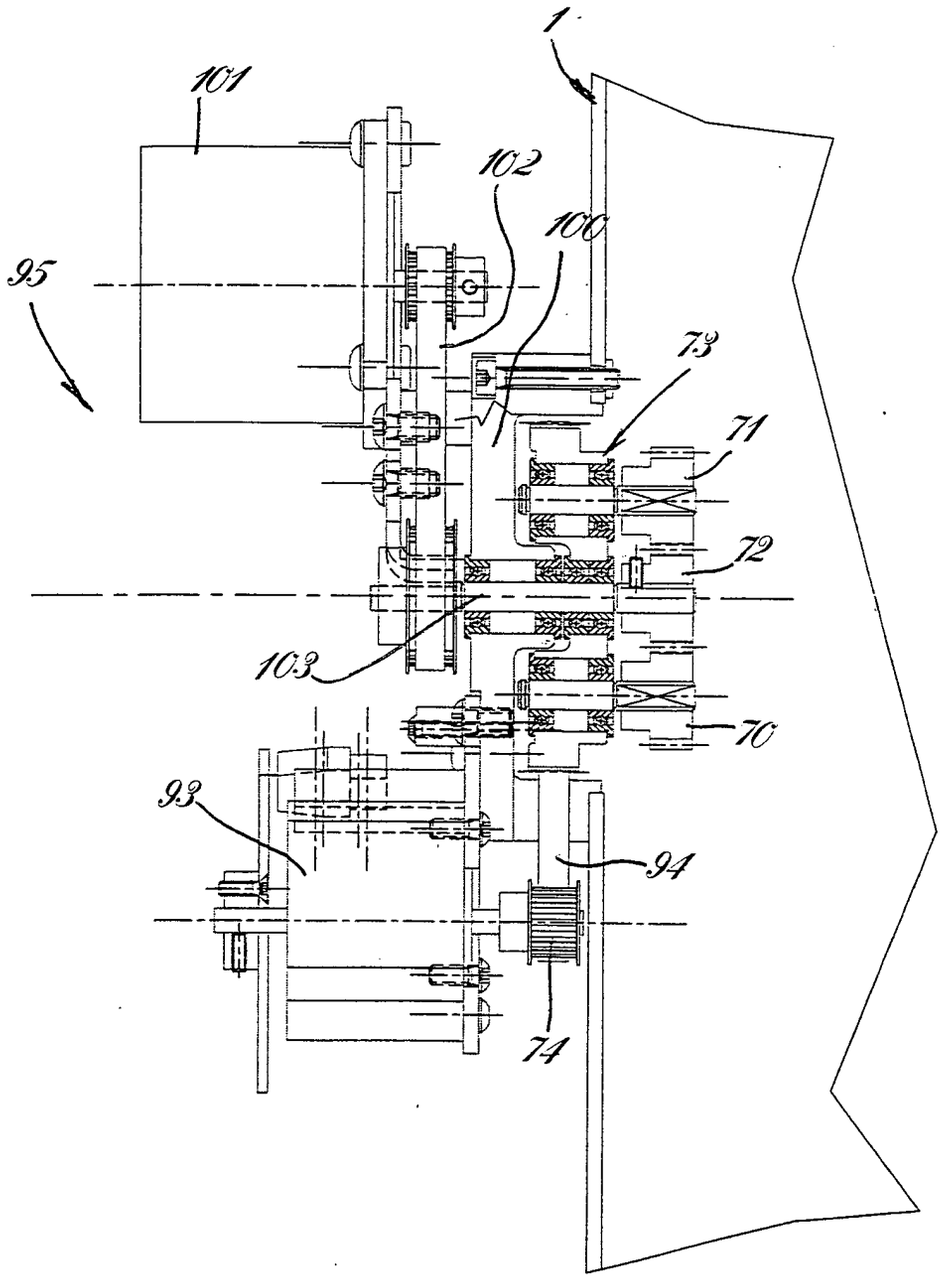


Fig. 14

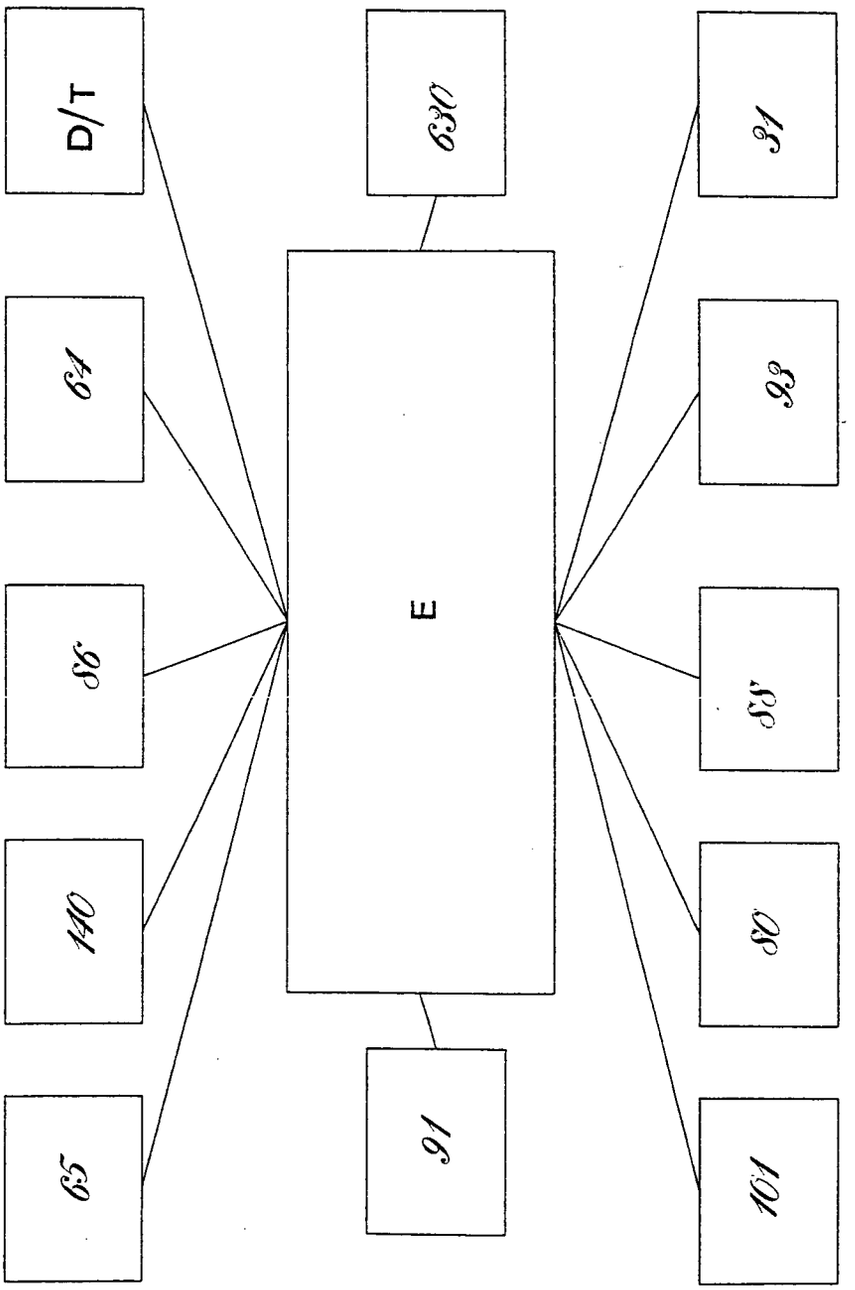


Fig. 15

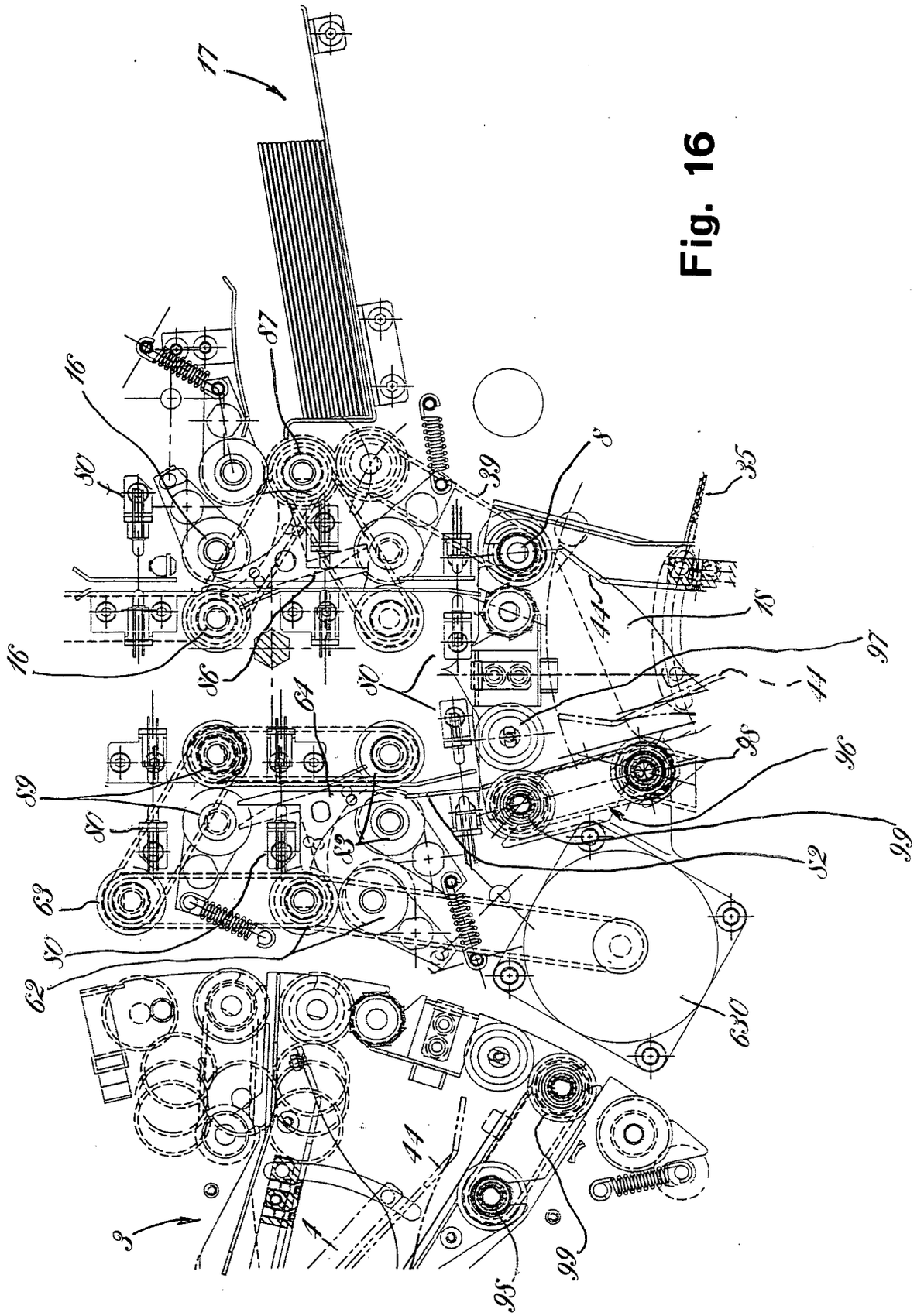


Fig. 16