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CA 2595094 C 2013/08/20

(11)(21) 2 595 094

(12) BREVET CANADIEN
CANADIAN PATENT

(13) C

(86) Date de dépôt PCT/PCT Filing Date: 2006/02/08
(87) Date publication PCT/PCT Publication Date: 2006/08/17
(45) Date de délivrance/Issue Date: 2013/08/20
(85) Entrée phase nationale/National Entry: 2007/07/17
(86) N° demande PCT/PCT Application No.: GR 2006/000006
(87) N° publication PCT/PCT Publication No.: 2006/085124
(30) Priorité/Priority: 2005/02/09 (GR20050100057)

(51) Cl.Int./Int.Cl. *A01K 47/00* (2006.01),
A01K 53/00 (2006.01)

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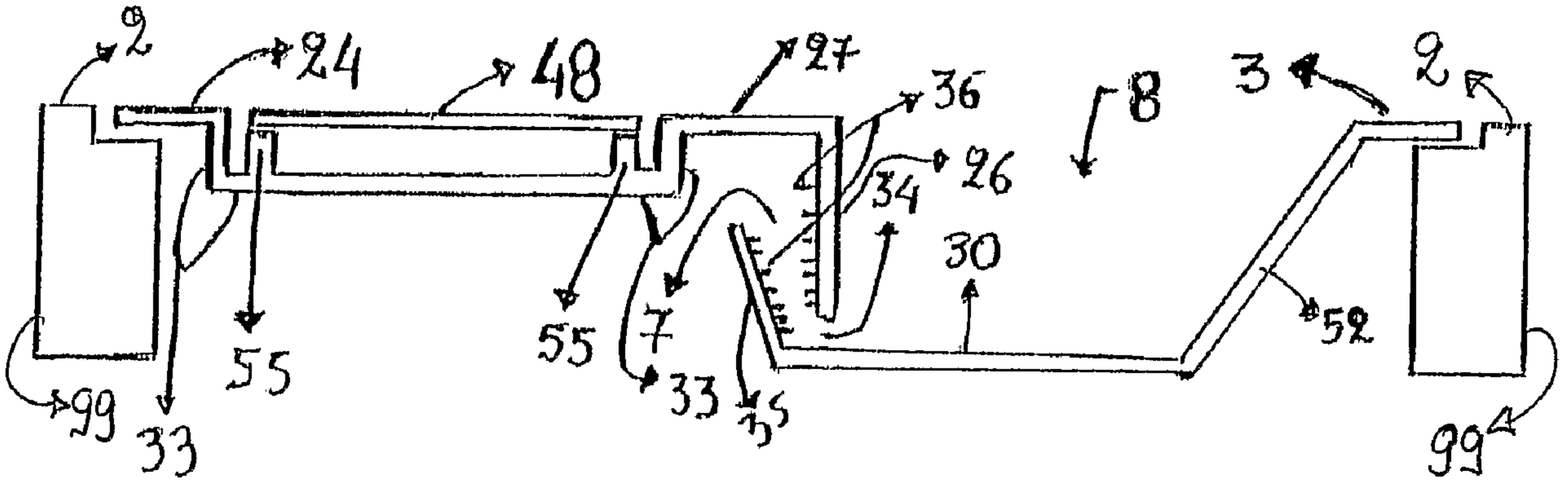
(54) Titre : COUVERCLE DE RUCHE
(54) Title: BEEHIVE LID



(57) Abrégé/Abstract:
The lid of the beehive has a split open top (10) held by a mechanism to the one side of the body (99) of the lid. By opening the top (10) of the lid a surface is revealed which has containers (8) on the one side and an easily open cover (48) on the other, which enables immediate access into the internal of the hive. On the top (10) of the lid there are shutters (11) that open and close the air intake holes (12) . The hive has a folding take off board (85) on its bottom reducing space during transportation. It uses dovetail (15,16) joints to withhold the sidewalls (94) . This makes it very durable.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
17 August 2006 (17.08.2006)

PCT

(10) International Publication Number
WO 2006/085124 A3

(51) International Patent Classification:
A01K 47/00 (2006.01) *A01K 53/00* (2006.01)

(21) International Application Number:
PCT/GR2006/000006

(22) International Filing Date: 8 February 2006 (08.02.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20050100057 9 February 2005 (09.02.2005) GR

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

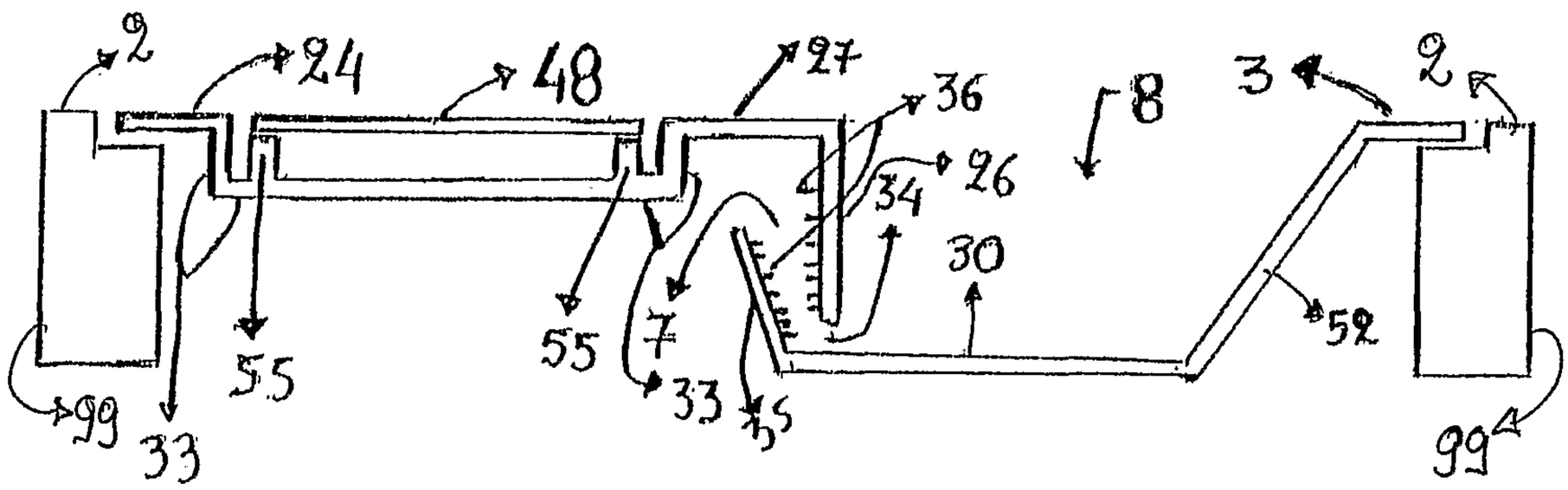
(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:
28 September 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BEEHIVE LID



(57) Abstract: The lid of the beehive has a split open top (10) held by a mechanism to the one side of the body (99) of the lid. By opening the top (10) of the lid a surface is revealed which has containers (8) on the one side and an easily open cover (48) on the other, which enables immediate access into the internal of the hive. On the top (10) of the lid there are shutters (11) that open and close the air intake holes (12) . The hive has a folding take off board (85) on its bottom reducing space during transportation. It uses dovetail (15,16) joints to withhold the sidewalls (94) . This makes it very durable.

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BEEHIVE LID

This invention generally refers to a beehive, specifically to its lid which has a top that opens and closes and under this exist containers and an opening with removable cover, has air intake holes with shutters that open and close, it has a special way to tie its woods together, and a special take off board at the bottom of the beehive.

In the beehives up to this time the lid covers the body of the hive and enables air circulation through the air intake holes. In order to work with the bees the lid has to be taken off with force because it has been glued with "propolis" by the bees. This fact stimulates and stresses the bees demanding much time and work by the apiculturist, and makes smoking the bees a necessity. The smoking though has the disadvantage of transferring all toxic substances to bees' products. The stimulation has the side effect of consuming honey and pollen by the bees, some bees' deaths, as well as looting from nearby beehives. Additionally in the lid and in the hive in general, nails and screws are being used to hold the wooden boards together resulting in the boards to loose tie and crack. The take off board is an extension of the bottom of the hive.

The beehive lid according to the current invention not only covers the body of the hive but also enables all the works inside the hive to take place under all weather conditions, without taking the lid off and without the need to smoke the bees, which results to less time and work needed by the apiculturist. This way we don't stimulate the bees, avoiding the consumption of honey and pollen, as well as the looting from nearby beehives. Using this lid we are able to watch the bees inside the hive

without disturbing them. The lid of this hive has to be taken off only when we have to work with the boards inside the hive. By adjusting the shutters of the air intake holes the apiculturist helps the bees to overcome any weather conditions. The lid and the body of the hive don't crack, don't loose tie nor rot because the sideboards are using dovetail joints to be held together and not nails nor screws. The space needed for the transportation of the hive is reduced because the take off board of the bottom flaps upwards blocking the main door and not permitting the bees to exit but allowing the air intake because of its riddled construction. The size of the take off board (82) can be lengthened in order to help the flying of the bees.

Arrangements of the above type are known for example from

US4546509 A/ HUETTER patent refers to a beehive, which permits more than one colony of bees in the same beehive with separate queen to collect and store honey, and is irrelevant to my invention.

US2340219 A/G.B. LEWIS COMPANY refers to beehives of generally conventional construction having improved rests or frame supporting members and is irrelevant to my invention.

US129464 A / CUNNINGHAM refers to the general construction of the beehive and not to a lid that opens and therefore is irrelevant to my invention.

US4736479 A / LAGERMAN refers to a method of beekeeping and not the lid of the beehive and therefore is irrelevant to my invention.

GR20020100010 A PANAGIOTAKIS K. refers to a mechanism of honey extraction and therefore is irrelevant to my invention.

US4199832 GLASSCOCK ET AL. refers to a beehive constructed with special material as foam e.t.c. and therefore is irrelevant to my invention.

US2300772 A / BORLAND refers to beehive body and frame construction and therefore is irrelevant to my invention.

My invention differs from all the above inventions because it has a lid that splits open and has internal mechanisms of feeding attending and watching the bees, because it has shutters on the air intake holes, because it uses dovetail joints to hold the sidewalls together and because it uses a folding take off board so is irrelevant to all inventions mentioned before.

In my invention the top of the lid is connected to its body with a connecting mechanism allowing it to open and close. The surface under the top has two sections, the one has containers where liquids are placed and in the other there is an opening through which we watch, feed and do whatever work needs immediate contact with the bees. A removable cover covers the opening. The air intake openings are being covered with shutters attached to the top of the lid with a connecting mechanism. The hive has a take off board attached to its bottom with a folding mechanism allowing it to open and close. The hive uses dovetail joints on the sidewalls.

Figure 1 shows a whole beehive with all the details of the invention.
Figure 2 is a longitudinal section of the lid at the point where it touches the cover of the internal opening from point A to B.
Figure 3 is a section of the lid of the hive from point C to D in the middle of the internal opening.
Figure 4 is a section from point E to F in the middle of the containers.
Figure 5 is a section of the top and the sidewalls of lid from point G to H.
Figure 1 shows the top of the lid (10) open and connected to one side of the body (99) of the lid with a connecting mechanism enabling it to open

and reveal the containers (8), the opening (9) the cover (48) of the opening (9) and the upper surface (2) of the body (99) of the lid .

In the containers (8) we place any liquid we want the bees to take. The liquid is being transferred through the gap (34) and fills the space (7) of the containers where the bees can take it from. The removable cover (48) fits to the groove (33) as shown in figure 3 of the surfaces (23,24,25,27) shown in figures 1,2,3.

The surface (26) is the extension of the surface (27) inclining into the containers shown in fig. 1,2 leaving empty space (34) between (26) and the bottom (30) of the containers (8). The empty space (34) is of such a construction allowing the liquids to pass through to empty space (7) while prohibits the bees to exit the hive. The side (35) of the container is lower than the other sides allowing the bees to enter the empty space (7) of the containers fig. 2. On the sides (35,26) of the empty space (7) there are stripes (36) helping the bees to clime up easily from space (7) after they take the liquids from the containers and return to inside the body of the hive without drowning. The surfaces (23,24,25,3) hold the containers and the removable cover (48) in the body of the lid and prohibit the bees to contact the top of the lid as shown in fig. 1,2,3,4.

The top of the lid (10) is covered by a metallic sheet (21), which emerges around the top of the lid (10) in order to protect the lid from the rain and wind. The sheet comes down to cover the gap (78) between the top (10) and the body (99) of the lid as shown in fig 1, 5.

The front and the back of the body (99) have air intake openings (12).

The shutters (11) are attached to the top (10) of the lid with a connecting mechanism (44) allowing them to open and close in front of the air intake holes (12) in order to cover them if needed. On the shutters (11) there are nails (50) that go into the air intake holes (12) holding the top

(10) of the lid down, so it cannot be opened by the blowing wind when the shutters are closed. Those nails are only on the shutters (11) of the opening side of the top of the lid. The mechanism (13) holds the body (99) of the lid with the body (94) of the hive. There are two of those mechanisms (13) each on an opposite side. The front side (52) of the containers (8) is inclined so as it leaves a gap between the container and the front panel of the body (99) of the lid. This gap allows the air to pass through to the body of the hive. The projections (55) on the four corners of the grooves (33) of the opening shown in fig. 2 are holding the removable cover (48) a bit higher than the lower (56) part of the grooves (33), to the same height of the surfaces (27,24,23,25) leaving a gap between the grooves and the removable cover (48) so as the propolis can be removed with the use of a thin knife. The gap (40) is smaller than the bee, not allowing it to exit towards the top (10) of the lid. The space between the surface of the removable cover (48), the containers and the top (10) of the lid provides an extra isolation layer because of the air trapped in.

The joints between the sides of the hive are made with dovetails (15,16) as shown in fig. 1 and use some glue. The folding take off board (85) is held on the bottom of the hive with a mechanism (88), may be longer (82) than usual helping bees to fly and their return to the main entrance (84). During the transportation of the hives it doesn't take any space because of its ability to fold in front of the main entrance of the hive. This way it blocks the main entrance not allowing the bees to exit. Because of its riddled construction it allows air circulation.

CLAIMS:

1. A beehive lid for covering a hive, the beehive lid comprising:

a top cover that opens using a connecting mechanism, under the top cover there is a surface attached to sidewalls of the lid which has an opening that is being covered by a removable cover; and

containers covered by the top cover, the containers being adapted for liquid placement therein;

wherein one side of the surface of the lid is inclined coming down into the containers leaving a gap between its end and a bottom of the containers through which liquids are being transferred inside a body of the lid to a space, the space being defined by walls having stripes and adapted to help bees to climb up and to prevent immediate contact with the top of the lid;

wherein the top cover being adapted to give a user the ability to have immediate access to the liquids placed in the containers without having any contact with the bees, wherein the top cover being adapted to give the user the ability by opening the removable cover to place or take anything inside, on the top cover of the lid there are shutters that open having the ability to be adjustable helping that way the bees to overcome any extreme weather conditions, when the shutters are closed they cover air intake holes, all the above are being done without taking the lid off and without smoking the bees avoiding this way to transferring the toxic substances of the smoke to bees' products.

2. The beehive lid according to claim 1, wherein a clear or riddled cover is adapted to slide in, after lifting the removable cover off, in order to watch the inside of the hive without allowing the bees to exit.

3. The beehive lid according to claim 1 further comprising a take off board attached to a bottom of the hive with a folding mechanism enabling the take off board to fold upwards gaining space during transportation of the hive, the take off board having a riddled construction giving ability of air intake, the take off board being extendable in size.

4. The beehive lid according to claim 1, wherein sidewalls of the hive being joined by dovetail joints with the use of glue to prevent the rotting of the hive.

5. The beehive lid according to claim 1 further comprising a metallic sheet covering the top cover and which emerges around the top cover in order to protect the lid from the rain and wind, the metallic sheet being adapted to extend down to cover a gap between the top cover and the body of the lid.

6. The beehive lid according to claim 1, wherein the surface attached to the sidewalls of the lid further comprising at least one projection adapted to hold the removable cover to a height level with the surface.

7. The beehive lid according to claim 1, wherein one of the walls defining the space is a skid extending from the bottom of the containers, the skid being lower than other sides of the containers allowing the bees to enter the space.

8. The beehive lid according to claim 1, wherein the shutters further comprising nails adapted to be received into the air intake holes thereby holding the top cover of the lid down.

9. A beehive system comprising:

a beehive body having sidewalls joined to form an enclosure having a bottom;

a take off board attached to the bottom of the beehive body via a folding mechanism enabling the take off board to fold upwards;

a lid body held to the beehive body by a holding mechanism on opposite sides of each other, the lid body having sidewalls featuring an upper surface, an opening defined therethrough, and at least one air intake opening defined through at least one of the sidewalls;

at least one at least one container receivable within the lid body, the at least one container having at least a surface, a bottom and a skid angularly extending from the bottom away from the surface, the surface being supported by the at least three sidewalls of the lid body;

a plurality of surfaces supported by at least three of the sidewalls of the lid body, the surfaces having grooves, projections on four corners of the grooves, and an additional surface which is an extension of one of the surfaces and is inclining into the at least one container defining a gap between its end and the bottom of the at least one container and a space between the surface and the skid of the at least one container;

a removable cover receivable into the grooves and held by the projections at a height level with the surfaces thereby defining a gap between a lower part of the grooves and the removable cover, the

removable cover being adapted to cover the opening defined in the lid body;

a top cover connected to the lid body via a connection mechanism enabling the top cover to open and reveal the at least one container, the opening of the lid body, the removable cover, the surfaces, and the upper surfaces of the lid body; and

at least one shutter attached to the top cover via a connecting mechanism allowing the at least one shutter to open and close in front of the air intake hole.

10. The beehive system according to claim 9, wherein the gap between the edge of the additional surface and the bottom of the at least one container being adapted to allow a liquid to pass through to the empty space while prohibiting bees to exit the beehive body.

11. The beehive system according to claim 9, wherein the skid of the at least one container and the additional surface of the surfaces each having stripes directed to each other and into the space, the stripes being adapted to assist the bees to climb and to prevent immediate contact with the top cover.

12. The beehive system according to claim 9, wherein the take off board having a riddled construction adapted for air intake, and wherein the take off board is foldable.

13. The beehive system according to claim 9, wherein the sidewalls of the beehive body being joined by dovetail joints with the use of glue to prevent rotting of the beehive body.

14. The beehive system according to claim 9, wherein the at least one shutter further comprising nails adapted to be received into the air intake holes thereby holding the top cover down.

15. The beehive system according to claim 9, wherein the surface of the at least one container is the front side of the at least one container which is inclined defining a gap between the at least one container and at least one of the sidewalls of the lid body, the gap being adapted to allow air to pass through to the beehive body.

16. The beehive system according to claim 9, wherein the gap defined between the removable cover and the lower part of the grooves of the surfaces is adapted to prevent the bees from exiting therethrough.

17. The beehive system according to claim 9, wherein the at least one container is a plurality of containers.

18. The beehive system according to claim 9, wherein the at least one air intake hole of the lid body is a plurality of air intake holes, each having a corresponding shutter attached to the top cover.

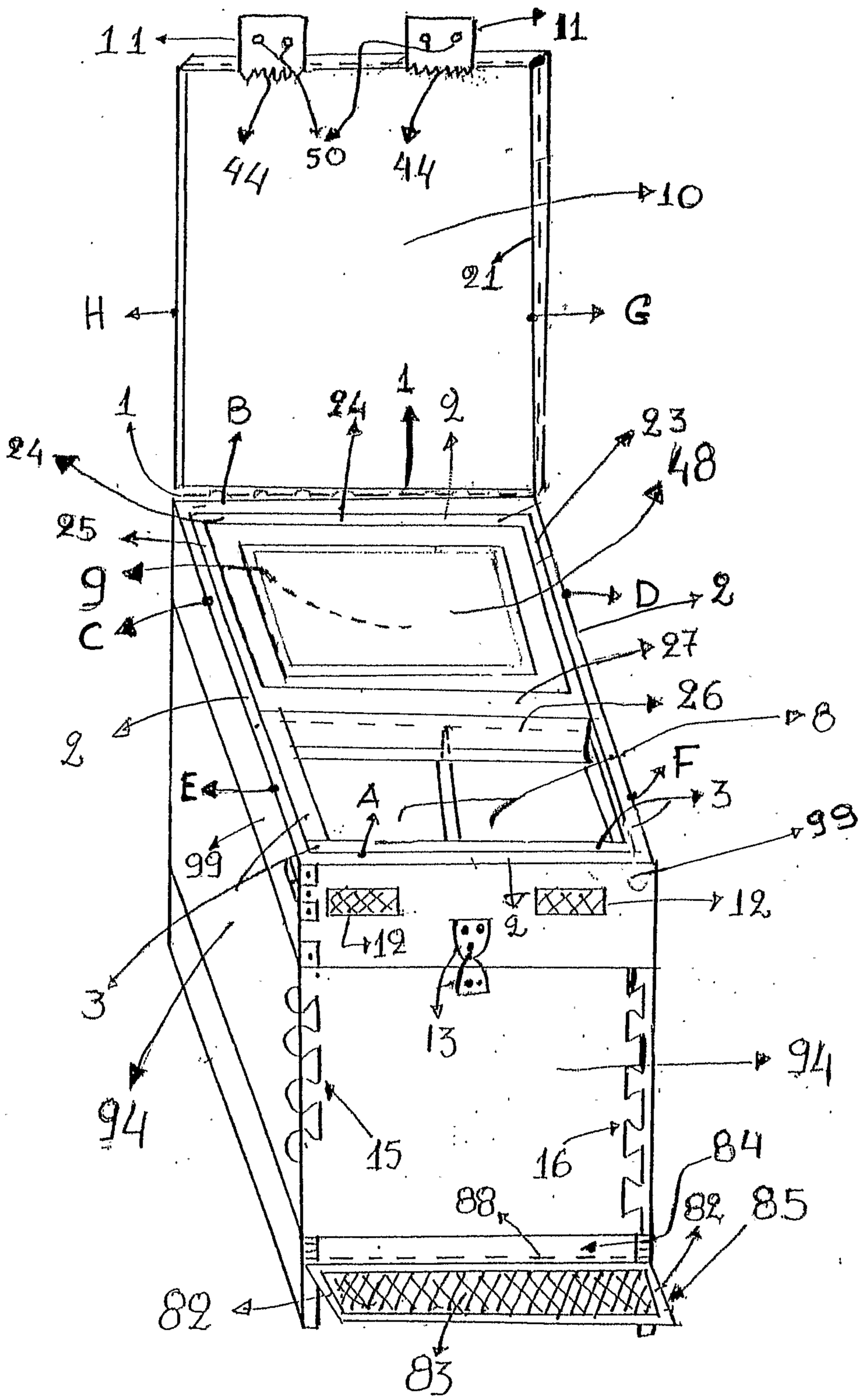
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Fig. 1

Fig.2

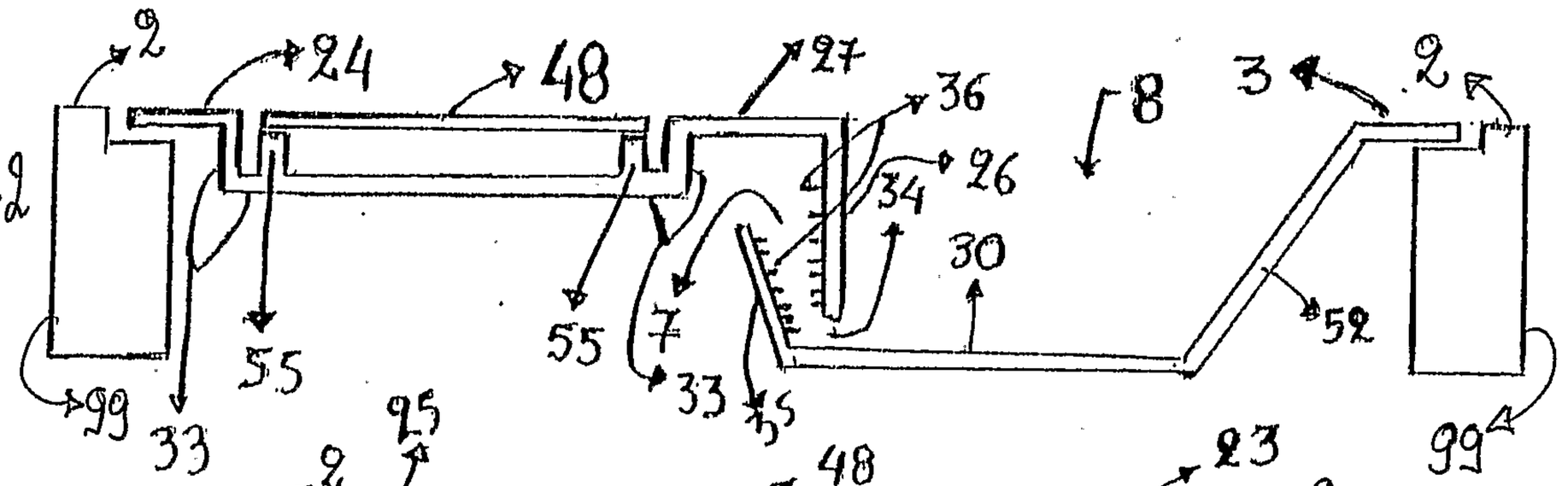


Fig 3

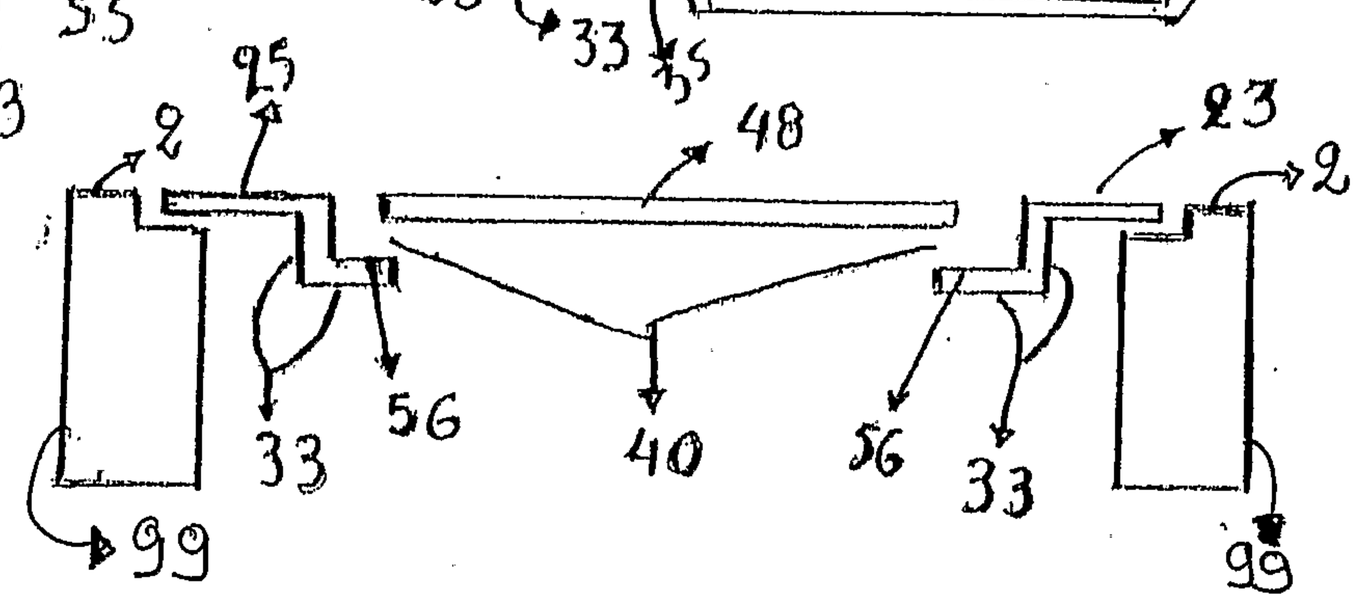
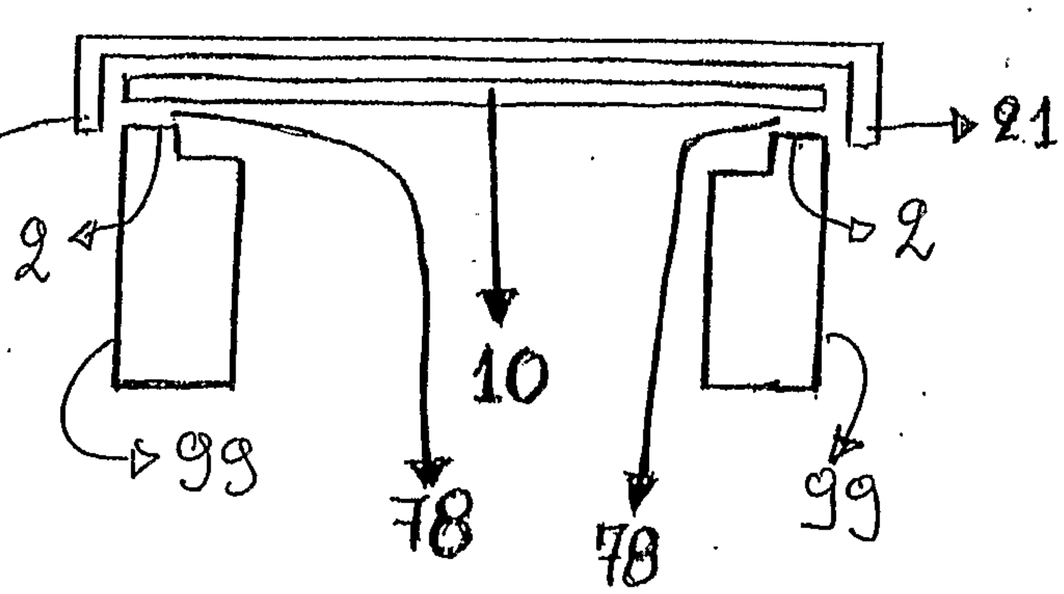
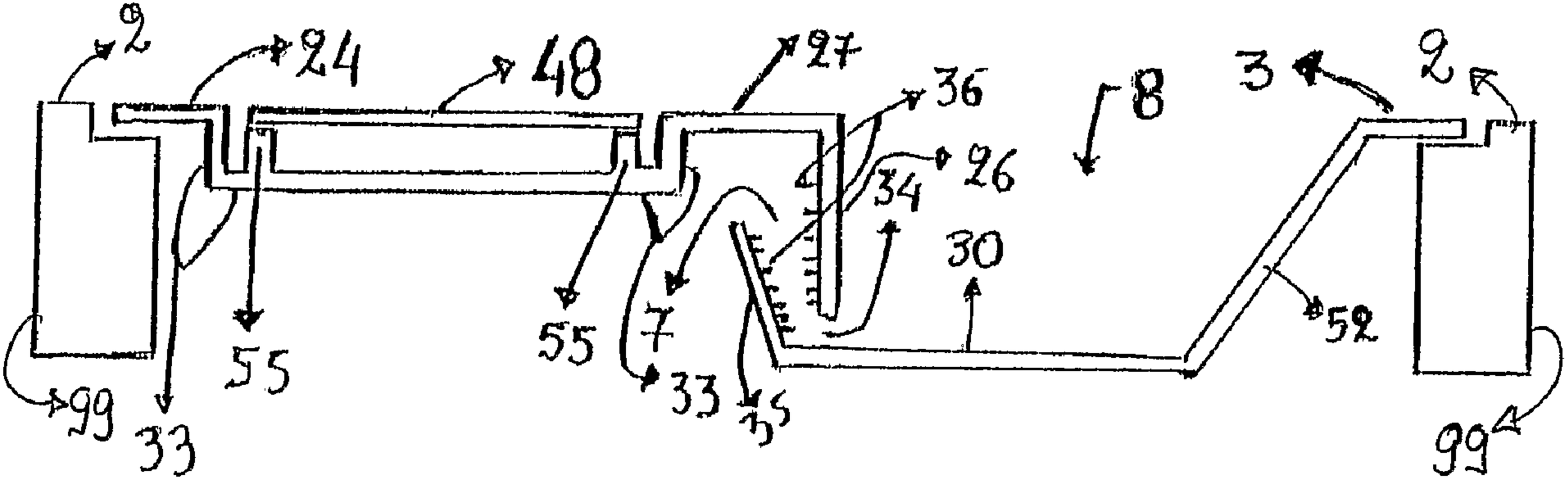


Fig 4

Fig5

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