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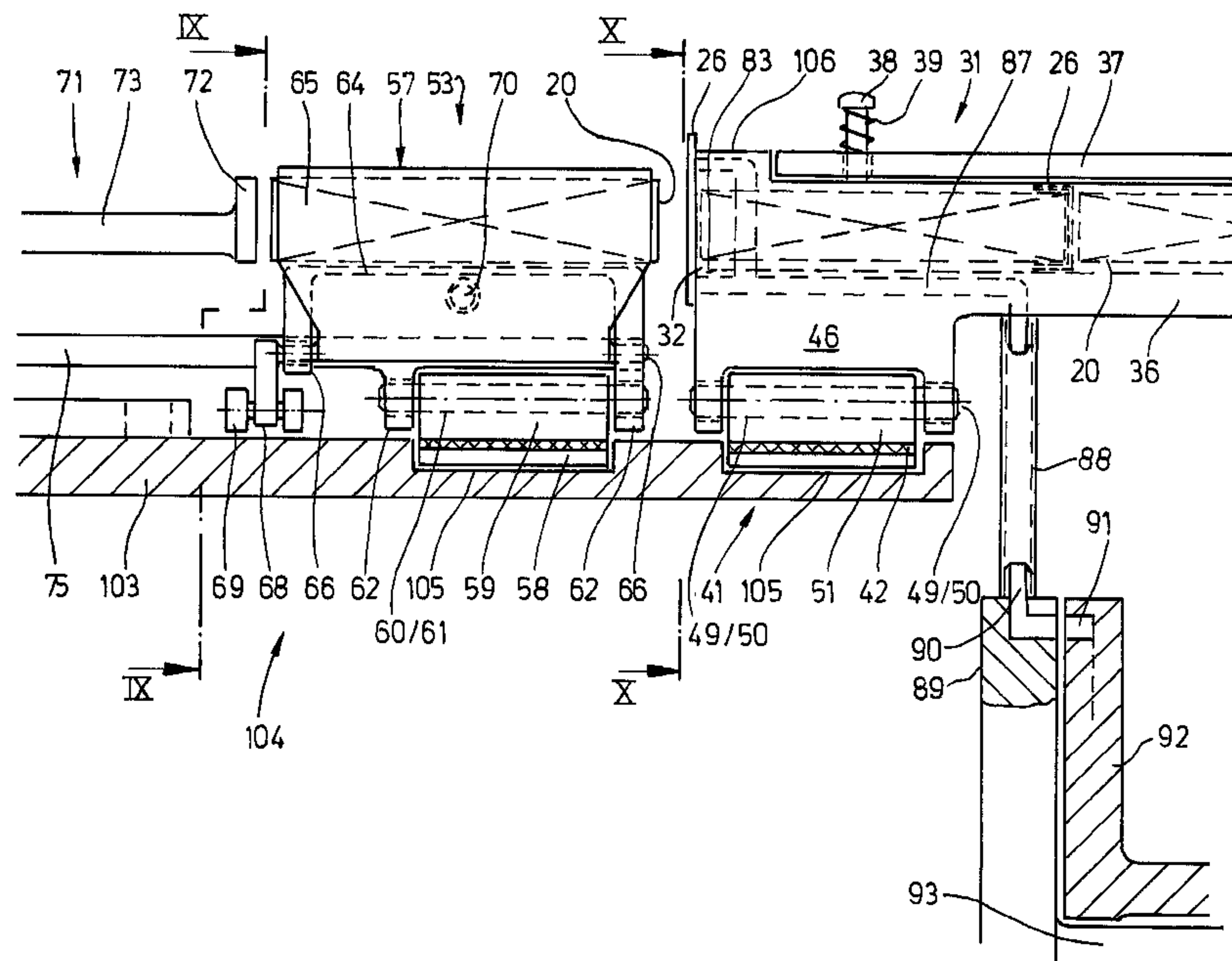
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(54) **DISPOSITIF DE MISE EN ATTENTE ASSURANT LE  
DURCISSEMENT D'EMBALLAGES SOUPLES POUR  
CIGARETTES**

(54) **APPARATUS FOR STABILIZING THE SHAPE OF CUBOIDAL  
(CIGARETTE) PACKS**



(57) In the production of packs with adhesively bonded folding tabs, especially of (soft) cup packs for cigarettes, it is necessary to keep the just finished packs for a while in an environment which preserves or improves their shape before they are discharged. For this purpose, an elongated pack channel (31) is provided, into which the finished packs (20) are pushed at one end (inserting opening 32) and which the packs leave after some time at the opposite end (discharge opening 33). The pack channel (31) has a cross-section which stabilizes or improves the cross-sectional shape of the pack (20). A plurality of pack channels (31) are mounted on a conveyor (channel conveyor 41) side-by-side. The packs (20) are inserted and ejected during a continuous transport of the endless channel conveyor (41). When the pack (20) enters a pack channel (31), a label (26) may be held ready which is folded round the forwardly pointing end face (23) of the pack (20) in a U-shaped manner by the insertion into the pack channel (31).

A b s t r a c t :  
(referring to Fig. 7)

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tabs, especially of (soft) cup packs for cigarettes, it is  
necessary to keep the just finished packs for a while in an  
environment which preserves or improves their shape before  
5 they are discharged. For this purpose, an elongated pack  
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continuous transport of the endless channel conveyor (41).  
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pointing end face (23) of the pack (20) in a U-shaped  
manner by the insertion into the pack channel (31).

D e s c r i p t i o n :

1 The invention relates to an apparatus for shaping or stabi-  
lizing the shape of cuboidal (cigarette) packs, especially  
during the setting of glue of adhesively bonded folding  
tabs.

5  
10 Packs made of paper or thin cardboard are usually designed  
such that folding tabs covering one another are connected  
to one another by adhesive bonding (glue). With packaging  
machines of particularly high performance, especially for  
cigarette packs, it is often not possible to guarantee a  
sufficient setting of glue areas because of the short  
cycles. This is the reason why these sort of packaging  
machines are equipped with separate drying turrets which  
hold a large number of finished but not yet dried packs  
(e.g. DE-A-26 32 968). Said drying turrets also have the  
function of preserving or stabilizing the (cuboidal) shape

1 of the pack.

Drying turrets of the abovementioned kind are complicated in structure and handling. Moreover, the capacity for the  
5 packs to be treated is not sufficient for machines of particularly high performance. Notwithstanding the high output, it is still desirable that the packs remain in a shaping unit for a sufficient amount of time to allow the glue areas to set.

10

Setting out from this problem, the invention is based on the object to further develop the apparatus mentioned above, such that packs, especially cuboidal (cigarette) packs, are held in a shaping or shape-stabilizing holder  
15 for an optimum amount of time.

To attain this object, the apparatus as taught by the invention is characterized in that elongate channel-like pack holders are arranged on an endless conveyor axis-  
20 parallel to one another, said pack holders being open at both ends and having a length being several times the length of one pack, said packs being insertable in the region of an inserting station via an inserting opening into the pack holder, thereby shifting the packs already  
25 held in the pack holder, such that at the opposite end at a discharge opening, one pack at a time can be ejected from the pack holder.

According to the invention, the pack holder is designed as  
30 a pack channel with a cross-section corresponding to the cross-section of the pack, be it rectangular or of any other shape. The packs are pushed into the pack channels at one end during the preferably continuous transport of the pack holders (pack channels) by the endless conveyor. By  
35 inserting a pack into the pack channel, a pack, having the proper shape and set glue areas, at the same time leaves the pack channel at the opposite end.

1 The axial length of the pack channel and the size of the  
endless conveyor determine the capacity of the apparatus for  
holding packs during the shaping and stabilizing process.  
If the endless conveyor is driven continuously, the per-  
5 formance can be even further increased.

The apparatus as taught by the invention also solves  
another problem occurring in the production or finishing of  
packs, especially cigarette packs. Cigarette packs are  
10 often provided with a revenue stamp or a closing strip  
which is transversely placed across an end face of the  
pack, with legs extending in the region of adjoining front  
and rear walls.

15 According to the invention, packs can be successively con-  
veyed in a tightly arranged row through a mouthpiece, such  
that while the end face of the pack is taking over the  
label and thereafter, the label held ready in the region of  
the mouthpiece abuts a bottom face, located opposite said  
20 end face, of a pack lying in front of the other pack in the  
conveying direction, such that said label is fixed in  
position between end face and bottom face of two adjacent  
packs. The mouthpiece may be designed in different ways,  
preferably as the inserting opening of a pack channel as  
25 taught by the present invention.

According to the invention, the labels are in this process  
fixed in place by suction bores at the end faces of the  
pack channels and are pulled thereof in a slipping manner.  
30 The suction bores are centrally disposed in the region of  
top and bottom wall. The suction bores are provided with a  
vacuum by a central distributing means running in synchro-  
nism with the circularly running pack channels.

35 According to a further feature of the invention, the label  
is, in the case of a continuously operating apparatus, con-  
tinuously fed to the endless conveyor for the pack channels  
and held ready in front of the entrance (inserting

1 opening), running in synchronism therewith.

Further features of the invention relate to the design of  
the pack channels, their connection to the endless con-  
5 veyor, the design of a pack conveyor and to means for  
feeding and holding ready the label or the like.

Exemplary emobodiments of the invention will be described  
below in more detail with reference to the drawings, in  
10 which:

Fig. 1 is a perspective view of a pack, namely a soft  
cup pack for cigarettes,

15 Fig. 2 shows a general side view of the apparatus for  
treating packs,

Fig. 3 shows a detail of the apparatus according to  
Fig. 2, on an enlarged scale,

20 Fig. 4 shows a detail of the apparatus in (top) plan  
view, as indicated by arrow IV,

Fig. 5 shows another detail of the apparatus according  
25 to Fig. 2, in the region where labels are  
supplied, in a side view as indicated by arrow V,

Fig. 6 is a cross-section of the apparatus according to  
Fig. 2, taken along the line VI-VI,

30 Fig. 7 shows a (central) section of the representation  
according to Fig. 6,

Fig. 8 shows a cross-section taken along the line VIII-  
35 VIII of Fig. 6,

1 Fig. 9 shows a cross-section taken along the line IX-IX  
of Fig. 6,

5 Fig. 10 shows a cross-section taken along the line X-X  
of Fig. 6,

Fig. 11 shows an upper region of a pack channel seen  
from the ejection end.

10 The exemplary embodiment of the apparatus which is shown in  
the drawings is particularly suitable for the treatment of  
cuboidal packs 20 of the soft cup type for accommodating  
cigarettes. Packs 20 of this type consist of an inner  
wrapping - usually of tin foil - for a cigarette group. The  
15 inner wrapping surrounds the cigarette group on all sides  
and thus forms a cigarette block 21. An outer wrapping is  
usually made of paper and is formed as a cup 22, i.e. it is  
open at the top. The cigarette block 21 slightly projects  
from the cup 22 at the top side.

20 The pack designed in this way comprises, amongst others, an  
(upper) end face 23 and adjoining rectangular faces located  
opposite to one another, namely front side 24 and rear side  
25, so that the pack has an overall cuboidal shape. An ad-  
hesively affixed strip of material or blank extends across  
25 the end face 23, namely a (revenue) label 26. This label 26  
rests with a central portion 27 on the end face 23. Legs  
28, 29 extend in the region of front side 24 and rear side  
25.

30 The pack 20 has several adhesive bonds, specifically in the  
region of folding tabs covering one another. In particular,  
the cup 22 is provided with adhesively bonded folding tabs  
which are formed in the region of a bottom (opposite the  
35 end face 23) and/or in the region of a side face 30 or two  
oppositely situated side faces 30.

1 It is an important task of the apparatus to guarantee a setting of the glue areas of the pack 20 while the cuboidal contour is preserved or stabilized at the same time.

5 For this purpose, the packs 20 are inserted into holders or pockets immediately after production, i.e. with "fresh" glue areas. These holders or pockets correspond to the (cross-sectional) shape of the packs 20 and thus surround the latter in a form-fitting positive manner. In the  
10 present embodiment, the apparatus is equipped with elongated shell-like holders for the packs 20, namely with pack channels 31, each for receiving a plurality of packs 20 - in the shown embodiment (Fig. 6) three packs 20. The pack channels 31 are open at both ends, so that the packs  
15 20 can be inserted at the one end, namely via an inserting opening 32, into the pack channel 31 in the longitudinal direction thereof. At the opposite end, the inserting process causes a pack 20 to leave the pack channel 31 via a discharge opening 33 at the same time.

20 The packs 20 are pushed into the pack channel 31 with the end face 23 pointing ahead. The pack channel 31 has a free inner cross-section corresponding to the (smaller) cross-section of the pack 20. The side faces 30 of the pack 20  
25 rest against side walls 34 of the pack channel 31. The end faces 23 bear against bottom faces 35 of adjacent packs 20 within the pack channel 31.

30 An advantageous embodiment of a cross-sectional design of the pack channel 31 follows in particular from Fig. 11. Accordingly, a bottom wall 36 forms a unit with the side walls 34, namely a profile having a U-shaped crosssection. A top wall 37 is formed as a separate element and is movably connected to the side walls 34. The latter is for  
35 this purpose provided with (upright) supporting bolts 38, on which the top wall 37 is shiftably mounted with respective bores. The top wall 37 is pressed against the upwardly facing side of the pack 20 with elastic pressure, in

1 the present case by means of pressure springs 39 arranged  
on the supporting bolts 38. As a result, a form-shaping  
pressure is applied to the packs 20 in the pack channel 31.

5 Bottom wall 36 and top wall 37 do not abut the packs 20  
with their full surface, but with ridge-like elevations 40.  
These extend in the central region of the pack channel 31,  
with a width being greater than that of the (likewise  
central) label 26.

10

A plurality of such pack channels is arranged on an endless  
conveyor side-by-side in parallel alignment and slightly  
spaced apart. In the present embodiment, the endless con-  
veyor runs over several deflecting rollers (not shown), in  
15 this case over four deflecting rollers. The contour of a  
channel conveyor 41 with pack channels 31 oriented trans-  
verse to the moving direction is shown in Fig. 2.

To form the endless conveyor with the pack channels 31, the  
20 latter are mounted on two band or belt conveyors spaced  
apart from one another, in the present case on toothed  
belts 42, 43.

For being affixed to the toothed belts 42, 43, the pack  
25 channels 31 are provided on their bottom side with connect-  
ing walls 46. The latter have a bore 47 and, located at a  
distance therefrom, a long hole 48. Ends of bearing bolts  
49, 50, which are firmly connected with the toothed belts  
42, 43, enter the long hole 48 and the bore 47 of the  
30 connecting straps 46. The bearing bolts 49, 50 are anchored  
in bead-like projections 51 disposed on the upper side of  
the toothed belts 42, 43 facing towards the pack channels  
31 by being embedded therein.

35 The mounting of one of the bearing bolts in a long hole 48  
allows for relative movements (see for instance Fig. 3)  
which result from the deflection of the toothed belts 42,  
43 in the region of the deflecting rollers (not shown).

1 The ready-folded packs 20, being adhesively bonded in the  
region of the folding tabs, are directly supplied from a  
folding turret 52 (or an accordingly designed intermediate  
conveyor). The packs 20 are then taken over by a pack con-  
5 veyor 53, which in this case is also designed as an endless  
conveyor. The pack conveyor 53 extends in a plane offset  
relative to the channel conveyor 41. An upper conveying  
strand 54 of the pack conveyor 53 and a receiving strand 55  
being in this embodiment of the same length run in synchro-  
10 nism with one another along a sufficiently long conveying  
track. This track is a transfer track 56 in which the packs  
20 are transferred from the pack conveyor 53 to the channel  
conveyor 41. This transfer of packs from one conveyor to  
another is conducted while both conveyors 41 and 53 are  
15 continuously moving without any interruptions.

The pack conveyor 53 is provided with pockets 57 arranged  
closely side-by-side for holding one pack each. The pockets  
are disposed on an elastic endless conveyor, namely a  
20 toothed belt 58. The latter is provided, in analogy to the  
embodiment shown in Fig. 11, with two projections 59 being  
spaced apart and affixed on the top side. Bearing bolts 60,  
61 penetrate these projections 59. Webs 62 bear against the  
ends of these bolts, specifically against the bearing bolt  
25 61 with a long hole 63. These webs 62 form part of a pocket  
bottom 64, on which the pack 20 rests. The pack 20 is  
laterally limited, namely in the region of the narrow side  
faces 30, by movable pocket walls 65. These walls 65 are  
designed with appropriate extensions as two-armed pivotable  
30 levers and are each pivotable about a pivot bearing 66. The  
free upper edges of the pocket walls 65 are formed with  
transverse holding legs 67, so that the packs 20 are  
embraced in a hook-like manner at their upper or outer  
side.

35 In order to receive a pack 20 from the folding turret 52,  
the pockets 57 are opened at the radially outer side by  
moving the pocket walls 65 apart. For this purpose,

1 actuating means 68 in the region of the opening of the  
pockets 57 are appropriately actuated. Supporting rollers  
69 are disposed at the ends of the actuating arms 68. These  
5 rollers 69 run up on appropriately designed curved paths  
(not shown), so that the pocket walls 65 are moved into the  
open position via the curved actuating arms 68. The pocket  
walls 65 are constantly loaded in direction of the closed  
position by a tension spring 70 connecting the oppositely  
situated pocket walls 65.

10 In closed position of the pockets 67 (Figs. 8 and 9), the  
pocket walls 65 are arranged such that the packs 20 can be  
pushed out of the pockets 57 being open at both ends in the  
longitudinal direction. For this purpose, each pocket 57 is  
15 associated with a slide 71, which continuously circulates  
with the associated pocket 57. The slide 71 consists of a  
slide plate 72, which engages the bottom face 35 of the  
pack 20. An elongated slide rod 73 is connected to a  
sliding member 74 which is shiftably mounted on a traverse  
20 75. The latter extends parallel to the path of movement of  
the slide 71, i.e. horizontally.

The slide 71 is automatically controlled, specifically in  
accordance with the conveying movement of the pocket 57 in  
25 the region of the transfer track 56. For this purpose, a  
guide pin 76 is arranged on the sliding member 74, said pin  
76 engaging a stationary cam groove 77. This cam groove 77  
is designed such that, with a continuous conveying movement  
of the pocket 57 with the slide 71, the slide 71 conducts  
30 the pushing-out movement, such that the pack 20 is moved  
from the pocket 57 into a directly opposite pack channel 31  
of the channel conveyor 41. Thereafter, the slide 71 re-  
turns to the starting position.

35 The pack conveyor 53 is connected with a separate slide  
conveyor 78 to form a conveying unit. A further endless  
conveyor, namely a toothed belt 79, extends at a distance  
from the pack conveyor 53, that is to say the toothed belt

1 58 thereof. This toothed belt 79 is designed similarly to  
the already described exemplary toothed belt embodiments.  
At the top side of this toothed belt 79 there are pro-  
jections in which bearing bolts 80 are held. Webs 81  
5 connected to the traverse 75 bear against and are attached  
to the ends of said bolts. Thus, the free end of the  
traverses 75 facing away from the pack conveyor 53 is  
connected to the toothed belt 79. The other end is connect-  
ed to the pocket 57 and therewith to the toothed belt 58 of  
10 the pack conveyor 53. The unit formed herewith, with two  
toothed belts 58, 79, is moved continuously, in synchronism  
with the channel conveyor 41.

By pushing a pack 20 with the slide 71 into the pack  
15 channel 31, a pack 20 is simultaneously pushed out the pack  
channel 31 via the discharge opening 33. Each pack 20 has  
by then circulated several times with the pack conveyor 41  
and has spent a respective amount of time in the pack  
channel 31, while being pushed forward in steps towards the  
20 discharge opening 33. The ready-set packs 20 are moved onto  
a discharge conveyor 82 extending immediately adjacent to  
the discharge opening 33.

In the shown embodiment, the pack 20 is provided with the  
25 label 26 in the region of the end face 23. This label 26 is  
held ready at the inserting opening 32 in front of each  
pack channel 31, so that the label 26 folds around the end  
face 23 and adjoining pack faces in a U-shaped manner when  
the pack 20 is pushed into the pack channel 31. The pack  
30 channels 31 are provided with bevels 83 in the region of  
the inserting opening 32 at the bottom wall 36 and the top  
wall 37.

Here, the inserting opening 32 acts as a mouthpiece which  
35 may also be designed in a different way. In particular,  
said mouthpiece does not have to be part of a pack channel.  
It is important though, that several packs 20 are  
successively transported in a tight arrangement, the end

1 face 23 and the bottom face 35 of adjacent packs 20  
abutting and supporting one another. The label 26 is there-  
with additionally fixed in position between the aforesaid  
5 pack faces of adjacent packs, so that undesirable changes  
of position are avoided until the adhesive bonds of the  
label 26 have set.

10 The label 26 is held ready in the region of the transfer  
track 56 in an upright position in front of the inserting  
opening 32. The label 26 abuts the end face of the pack  
channel 31, specifically the bottom wall 36 on the one hand  
and the top wall 37 on the other hand, in central position  
relative to the inserting opening 32.

15 For (releasably) fixing and positioning the label 26 in  
this position, suction bores 84, 85 open out into the end  
faces of bottom wall 36 and top wall 37 in the region of  
the label 26. In the present example, two suction bores 84,  
85 being spaced apart from one another are provided in each  
20 case. These suction bores 84, 85 are connected to suction  
conduits 86 extending in the region of top wall 37, side  
wall 34 and bottom wall 36 of the pack channel 31. In the  
longitudinal direction thereof, a connecting conduit 87  
extends in the bottom wall 36. This connecting conduit 87  
25 leads out of the bottom wall 36 and is connected to a  
flexible vacuum line 88, i.e. a hose.

30 In the shown embodiment, the pack channels 31 are designed  
in the region of the inserting opening 32 as a cross-  
sectionally closed and rigid mouthpiece 106. In the region  
of this mouthpiece 106, there are located the suction  
conduits 86. The movable part of the upper wall 37 extends  
from this mouthpiece 106. The rigid mouthpiece 106 ensures  
a particularly accurate shaping of the pack 20 when the  
35 latter is pushed in. Furthermore, the label 26 is pressed  
to and folded round the pack 20 with particular accuracy.

1 The suction air, that is to say the vacuum, is distributed  
by a central common vacuum means. Said vacuum means in this  
case consists of a suction disc 89 with suction connections  
90 opening out into the radially outer face thereof. The  
5 vacuum lines 88 are connected to these suction connections  
90. In their turn, the suction connections 90 are in  
connection with a distributing segment 91 in the region of  
a side face of the suction disc 89. This distributing seg-  
ment 91 is formed as an open groove in a fixed distributing  
10 disc 92. The distributing segment 91 is connected to a  
vacuum source in an appropriate way.

The suction disc 89 is mounted on a rotatingly driven shaft  
93 and is driven in synchronism with the (continuous) con-  
veying movement of the pack channels 31. The suction disc  
15 89 is arranged centrally within the region enclosed by the  
channel conveyor 41, as can be particularly seen from Fig.  
2. As a result of the design of the channel conveyor (de-  
flected via four deflecting rollers), there are varying  
20 distances which are compensated by respective lengths of  
the deformable vacuum lines 88. The distributing segment 91  
serving for transferring the vacuum extends in a portion of  
the periphery of the suction disc 89, such that a vacuum is  
generated in the region of the suction bores 84, 85 along a  
25 section of the transfer track 56. After the label 26 has  
been taken along by a pack 20, the suction air in the  
region of the suction bores 84, 85 is cut off.

The labels 26 are fed to the pack channels 31 by a separate  
30 label conveyor 94, which in this case is designed as a  
label drum which is driven to continuously rotate, specifi-  
cally in synchronism with the pack channels 31.

The label conveyor 94 is located in the region of an up-  
right conveying track of the channel conveyor 41, namely in  
35 the region of a conveying strand 95. The label conveyor 94  
is arranged in front of the end faces of the pack channels  
31 which are receiving the labels 26. The relative position

1 is such, that the peripheral surface of the label drum leads up to the end faces of the pack channels 31, specifically in the region of bottom wall 36 and top wall 37.

5 In the present embodiment, the drum-like label conveyor 94 is provided with radially projecting rib-like label carriers 96. The labels 26 rest on these label carriers 96 with a central strip-like portion. Suction bores 97 open out into the free contact surface of the label carriers 96  
10 for holding the labels. When the labels are transferred to the pack channel 31, the suction bores 97 are ventilated.

The label conveyor 94 is associated with a gluing unit 98, with which lateral glue surfaces or strips are applied to  
15 the edge portions of the labels 26 in order to connect the latter with the pack 20. The gluing unit 98 is provided with a drum-like glue-applying means 99, which takes glue from a glue container 100 in a strip-like manner. The glue-applying means 99 contains rib-like radial projections  
20 101 having glue on their outer sides. The projections 101 are arranged in pairs and spaced apart from one another at a distance which corresponds to the arrangement of glue strips on a label 26. These labels are moved past the glue-applying means 99 on a conveyor roller 102, such that  
25 the glue strips are therewith transferred from the projections 101 to the outwardly facing side of the label 26. In this process, the labels are held on the conveyor roller 102 by means of suction air. Subsequently, the labels 26 provided with lateral glue strips are transferred to the  
30 label conveyor 24, that is to say each label to a label carrier 96 thereof. The label 26 rests on the label carrier 96 with a portion located between the glue strips.

35 When the label 26 is transferred to a pack channel 31, the glue strips are located on the outer side, so that they are facing towards the pack 20.

1 The parallel extending conveyors which convey the means  
associated therewith, i.e. toothed belts 42, 43 and 58, 79,  
are mounted on a common supporting means. This supporting  
means is a continuous machine plate 103 being part of a  
5 machine frame 104. In the region of the toothed belts,  
indentations 105 are formed in the machine plate 103 so  
that said toothed belts can run therein.

10 The apparatus is also suitable for the processing of such  
packs which are not to be provided with a label 26. In this  
case, the means necessary for the supply and transfer of  
the label are missing.

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**CLAIMS:**

1. Apparatus for shaping or stabilizing the shape of cuboidal packs having folding tabs adhesively bonded to one another, with elongated, shaftlike pack holders whose cross-section corresponds to that of the packs and which are arranged on an endless conveyor longitudinally axis-parallel to one another, packs being insertable via an inserting opening into the pack holder, thereby shifting the packs located in the pack holder, with the following features:
- 5
- 10 a) the pack holders are designed as pack channels open at both ends, in which the packs can be shifted with alternating support, in such a way that by means of the insertion of one pack into one pack channel, a pack located in this pack channel can be ejected from a discharge opening lying opposite the inserting opening,
- 15
- b) a plurality of pack channels are movable by the endless conveyor to continuously circulate, the insertion of a fresh pack into and the ejection of a pack out of this pack channel taking place in the region of a transfer track,
- 20
- c) a pack conveyor, by means of which the packs can be transported continuously in a cross-axial direction in synchronism with the pack channels and are thereby aligned with the inserting opening of the pack channels in such a way that during the common transport the packs are insertable in the longitudinal direction into the allocated pack channels by means of inserting members moved in synchronism with the packs.
- 25
- 30

2. Apparatus according to Claim 1, wherein the channel conveyor is designed as a belt conveyor with two conveyor

- 15 -

belts running parallel to each other and arranged at a distance from each other, to which the pack channels lying next to each other are fastened.

- 5      3. Apparatus according to Claim 1 or 2, wherein the packs can be ejected out of the pack conveyor and inserted into the pack channels along a rectilinear, common, parallel transfer track of a pack conveyor for the packs and of the channel conveyor.
- 10
4. Apparatus according to Claim 1, wherein the inserting members are slides and in that each pack channel is associated with a slide being movable in the longitudinal direction of the pack channel and being conveyed in
- 15      synchronism therewith, the slides being mounted on a separate slide conveyor and being movable during transport by the latter in their longitudinal direction for pushing one pack at a time into a pack channel.
- 20      5. Apparatus according to Claim 3, wherein the pack conveyor consists of an endless conveyor with pockets for receiving one pack each, the pockets being aligned with the pack channels and the slides simultaneously serving for pushing packs out of the pockets and for pushing them into
- 25      the pack channels.
6. Apparatus according to Claim 4, wherein the slides are mounted on a traverse extending parallel to the direction of movement of the slides, by means of a sliding member,
- 30      with the movements of the slides being conductable by means of a guide pin attached to the sliding member engaging in a stationary cam groove.

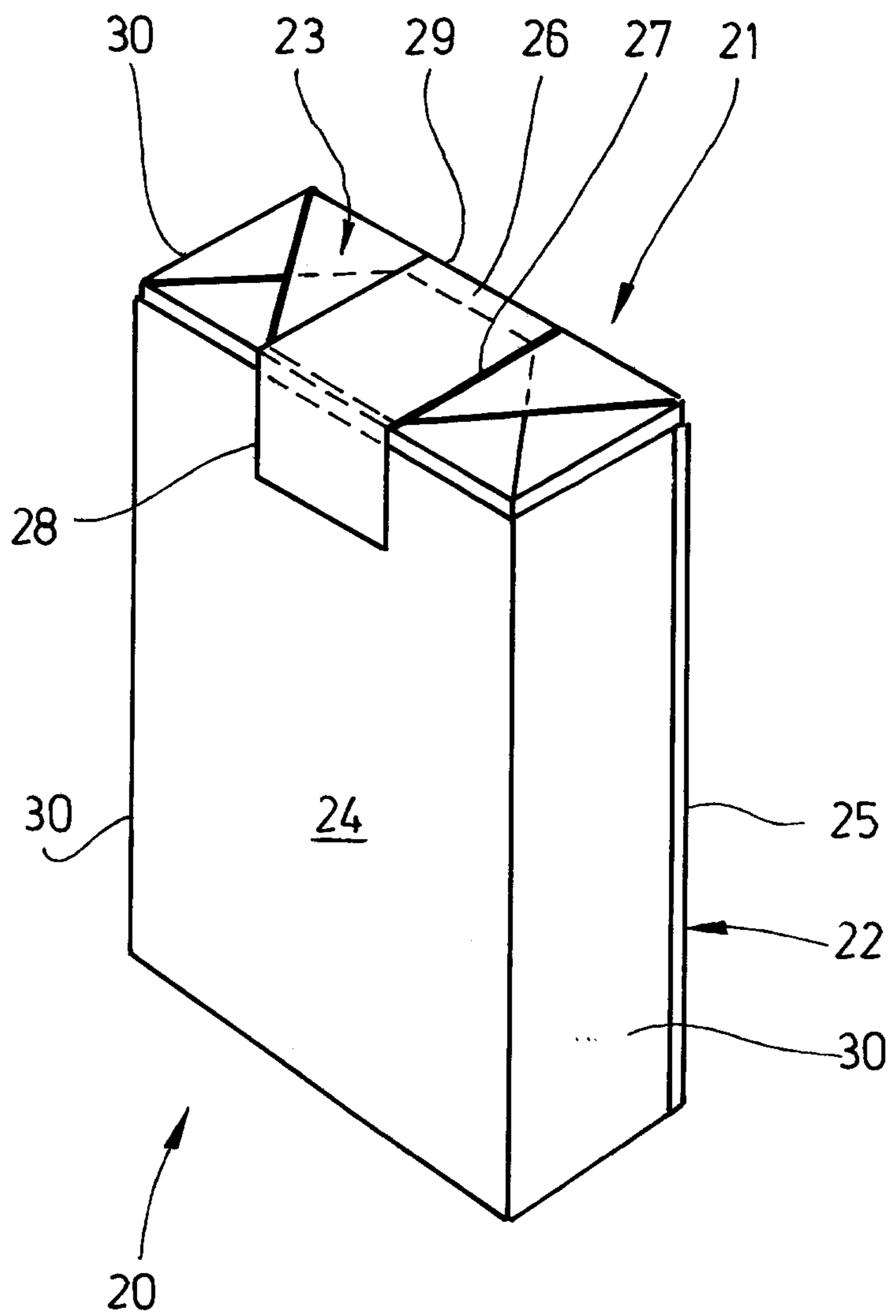
7. Apparatus according to Claim 6, wherein the traverse is connected on the one hand to the slide conveyor and on the other hand to the pack conveyor.
- 5 8. Apparatus according to Claim 6, wherein the packs are insertable into the pockets of the pack conveyor in the radial direction and are ejectable therefrom by the slide in the axial direction.
- 10 9. Apparatus according to Claim 8, wherein the pockets consist of a pocket bottom for the packs to rest on and transversely movable, in particular pivotable, lateral pocket walls, said pocket walls being movable away from one another in order to receive a pack.
- 15 10. Apparatus according to Claim 1, wherein the pack channels have at least one movable channel wall, especially a top wall being movable against the front side or rear side of the pack, said movable wall being elastically loaded in the direction of abutment with the pack.
- 20 11. Apparatus according to Claim 10, wherein a bottom wall and side walls of the pack channel form a single-piece workpiece having a U-shaped cross-section, the top wall being movably mounted on upper edges of the side walls.
- 25 12. Apparatus according to Claim 1, wherein in front of the inserting opening of the pack channels in each case one strip-like blank, a label, is held ready in such a way that when a pack is inserted into a pack channel the label is foldable in a U-shape around an end face of the pack as well as an adjoining pack face.
- 30 13. Apparatus according to Claim 12, wherein the label is fixable to the pack channel by suction bores opening out at
- 35

the end face of the pack channel, especially in the region of bottom wall and top wall, suction conduits and connecting conduits in the pack channel being connected to the suction bores and linked via flexible vacuum lines or hose lines to a common distributing means which is movable in synchronism with the pack channels.

14. Apparatus according to Claim 10, wherein a portion of the pack channel facing towards the inserting opening is designed as a cross-sectionally closed and rigid mouthpiece having the cross-section of a pack.

15. Apparatus according to Claim 12, wherein the labels are feedable to the end faces of the pack channels by means of a label conveyor conveying in the moving direction of the pack channels, which label conveyor is designed as a drum, the labels being fixed to the periphery of this drum by means of suction air, specifically with their longitudinal direction being in axis-parallel or axial orientation.

FIG. 1



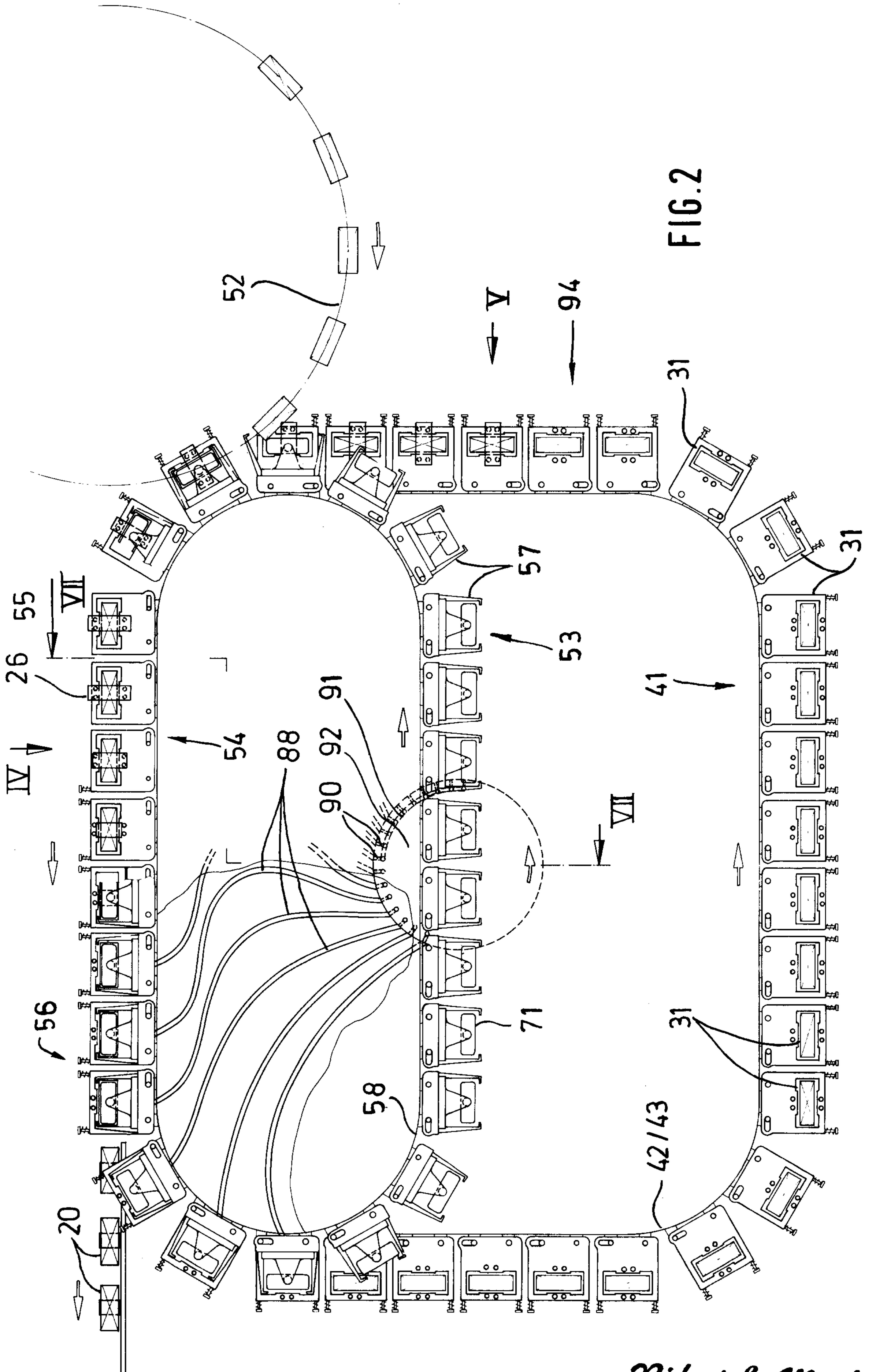


FIG. 2

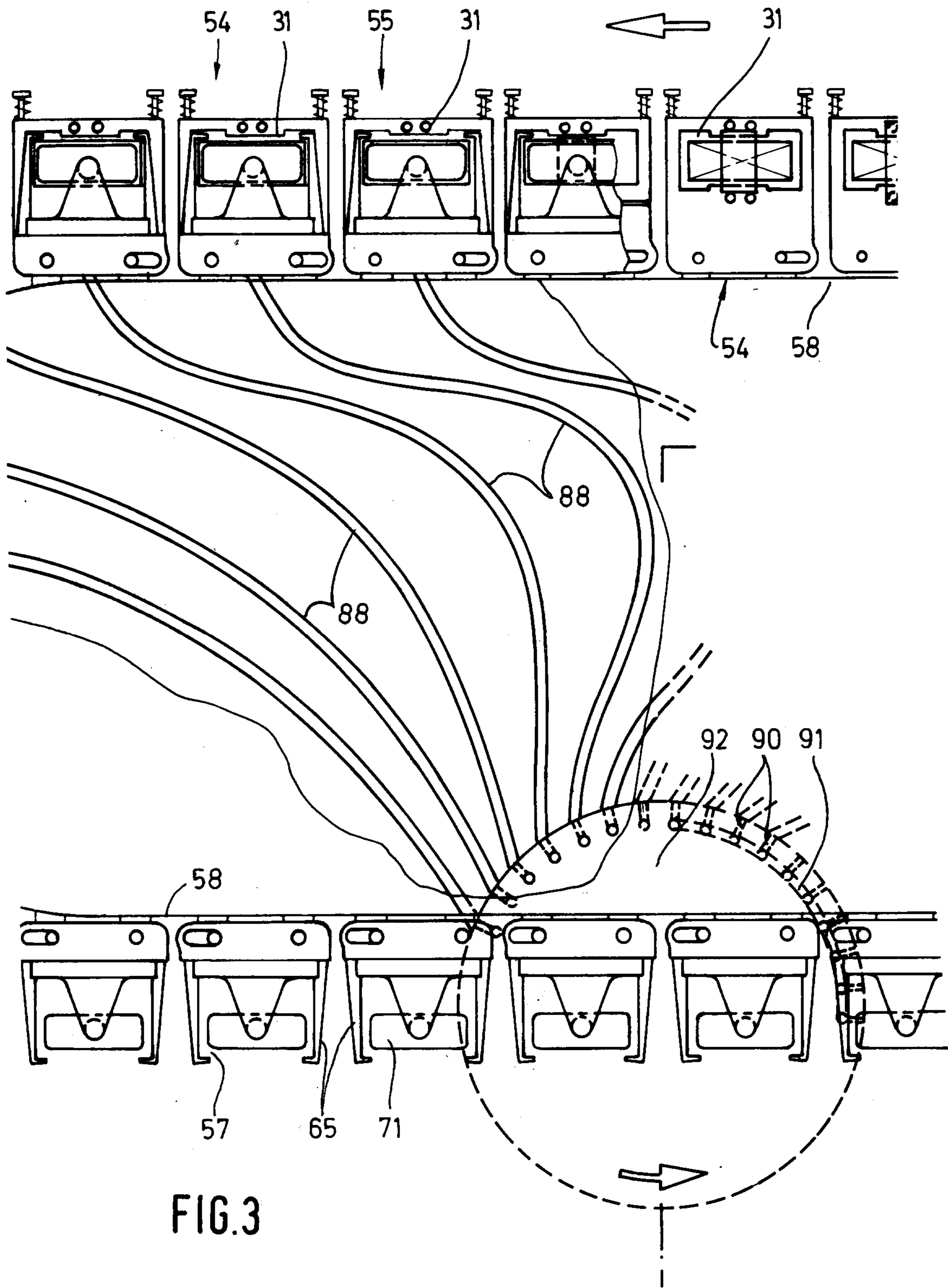


FIG.3

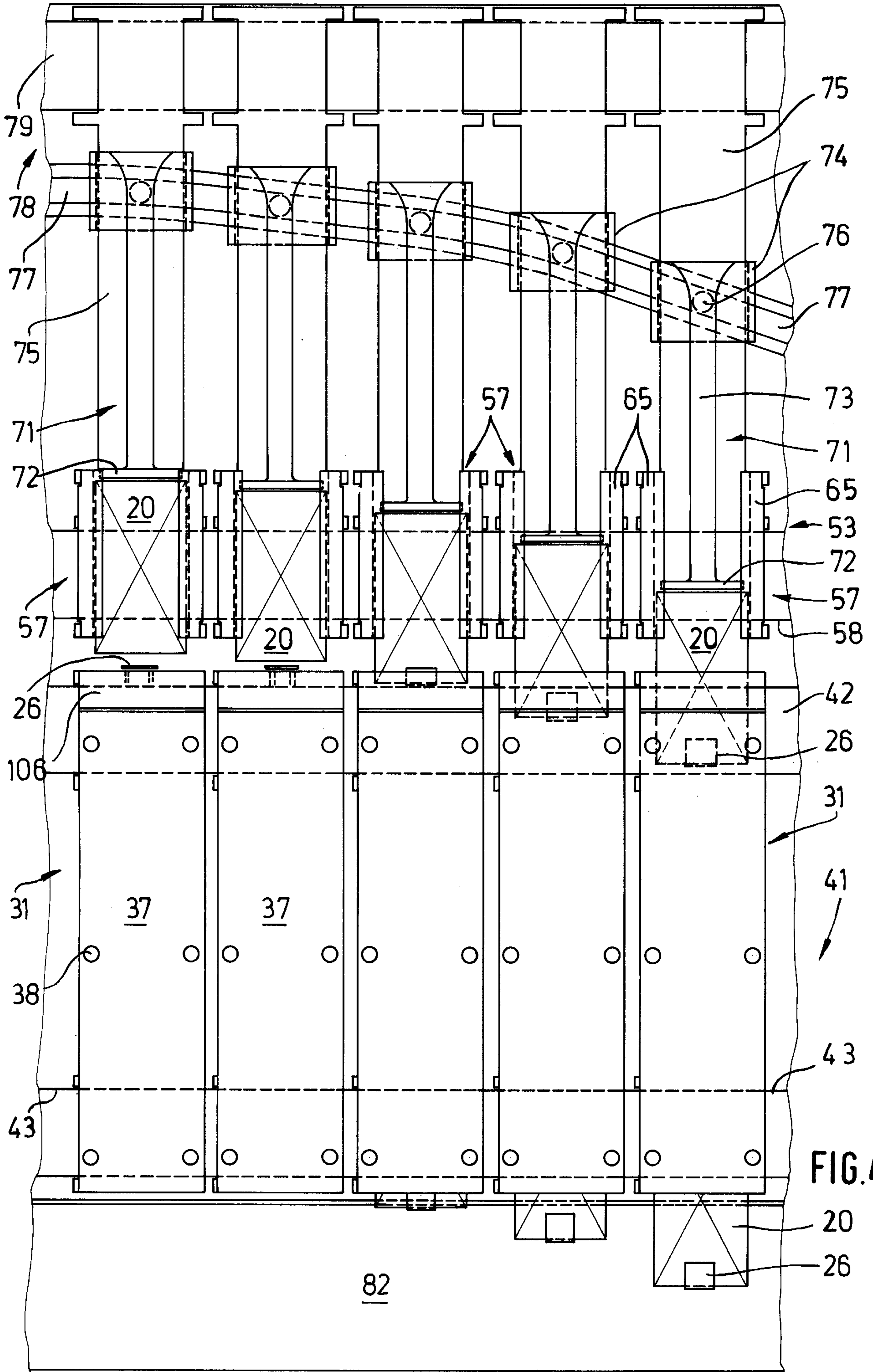


FIG. 4

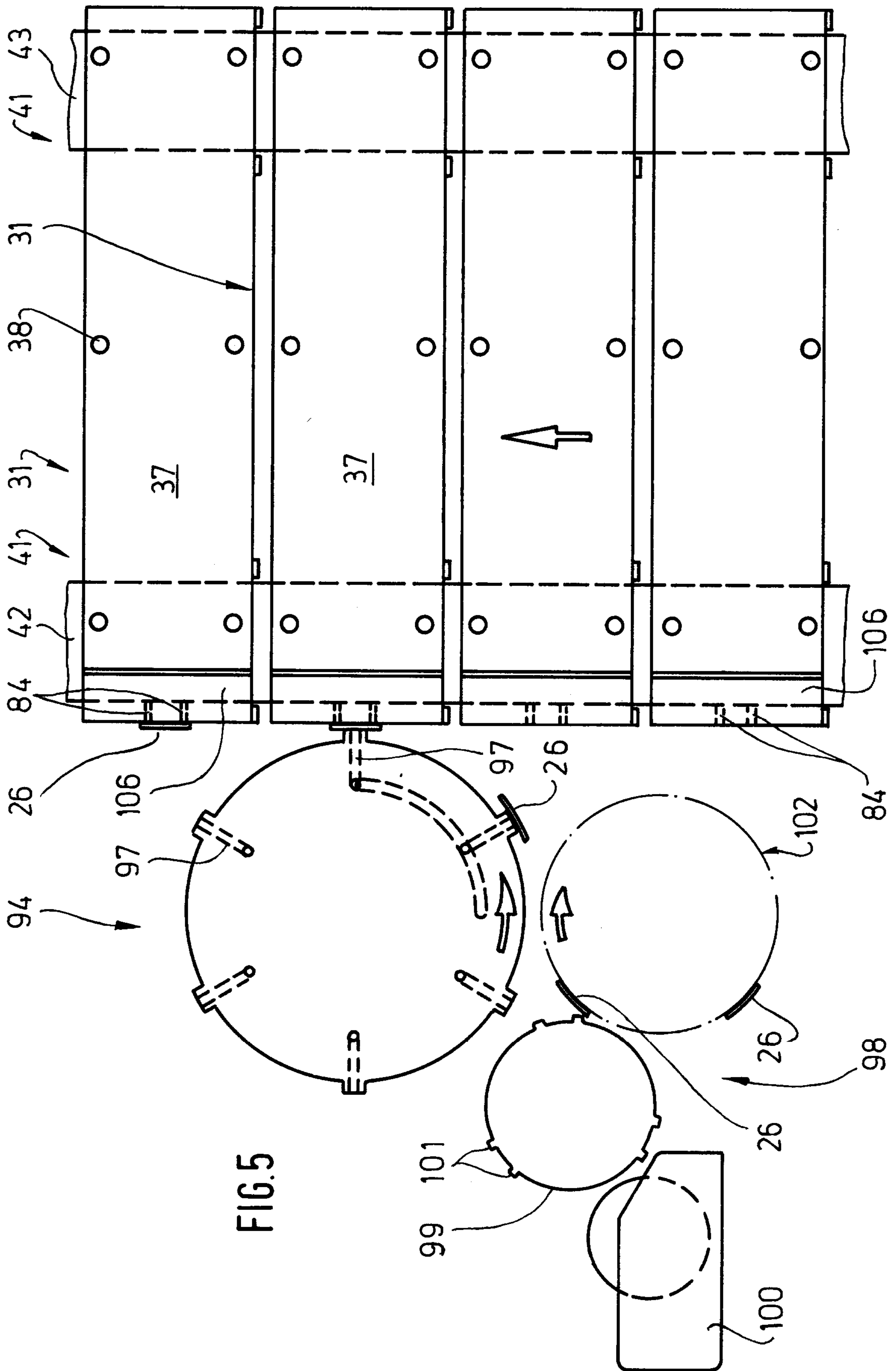


FIG. 5

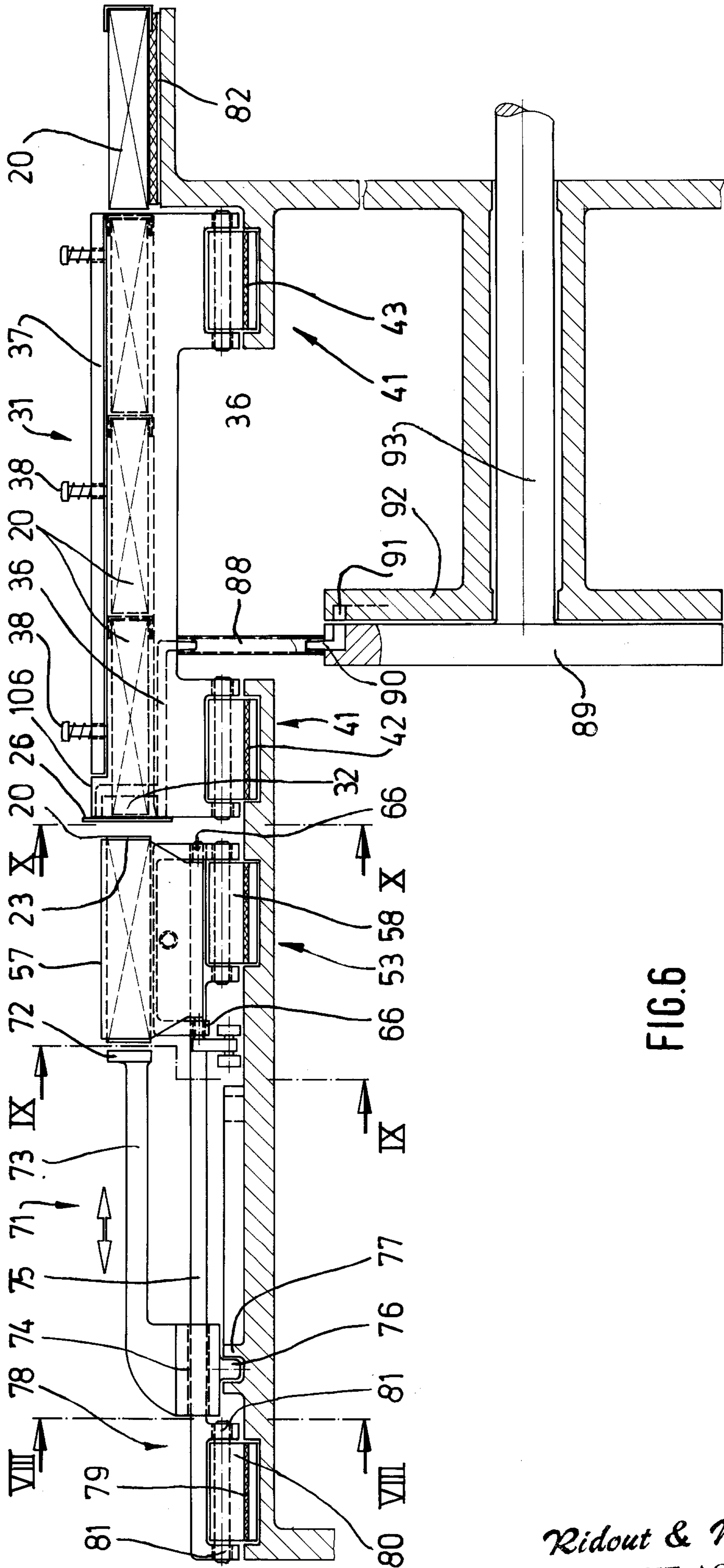


FIG. 6

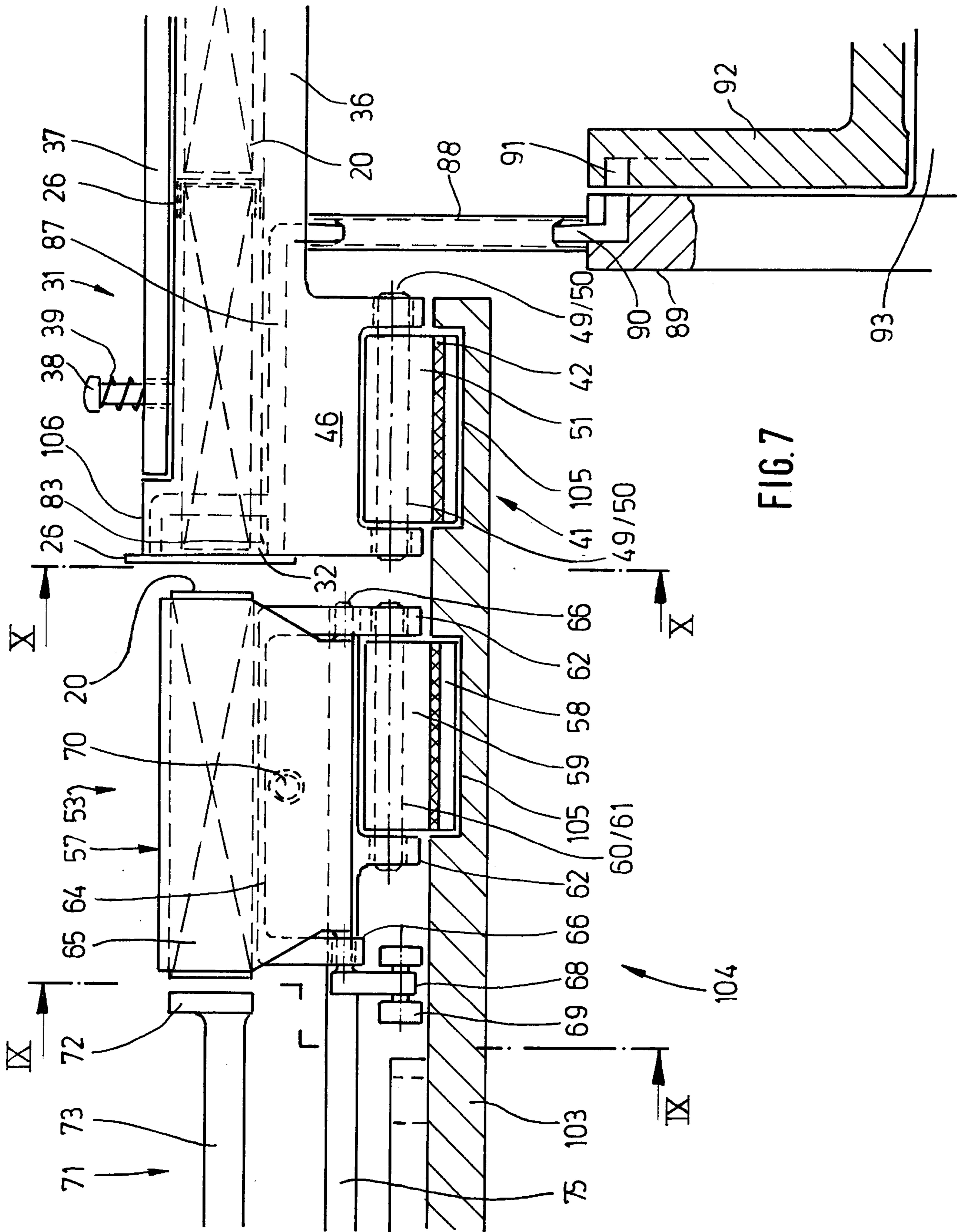


FIG. 7



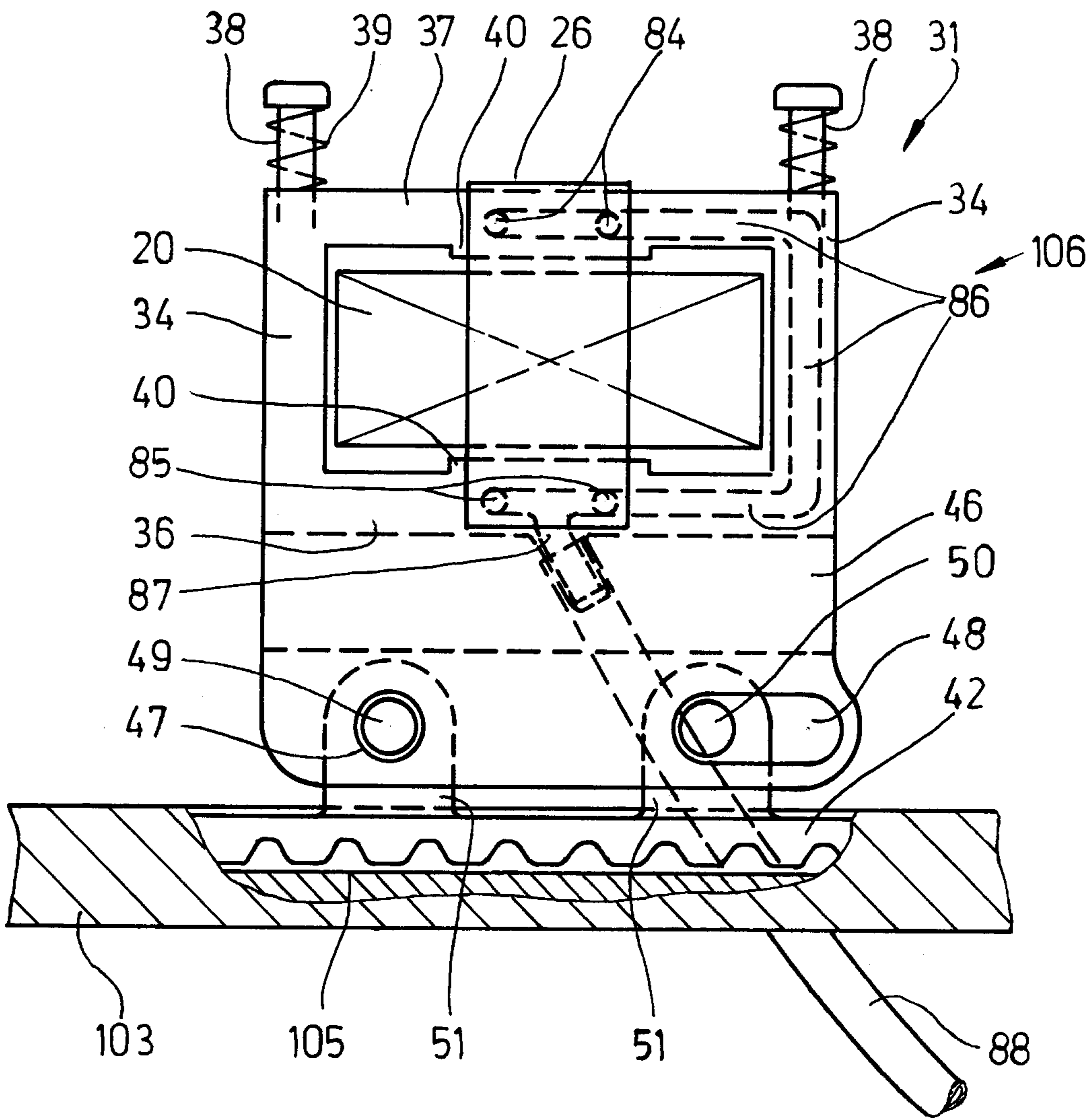


FIG.10

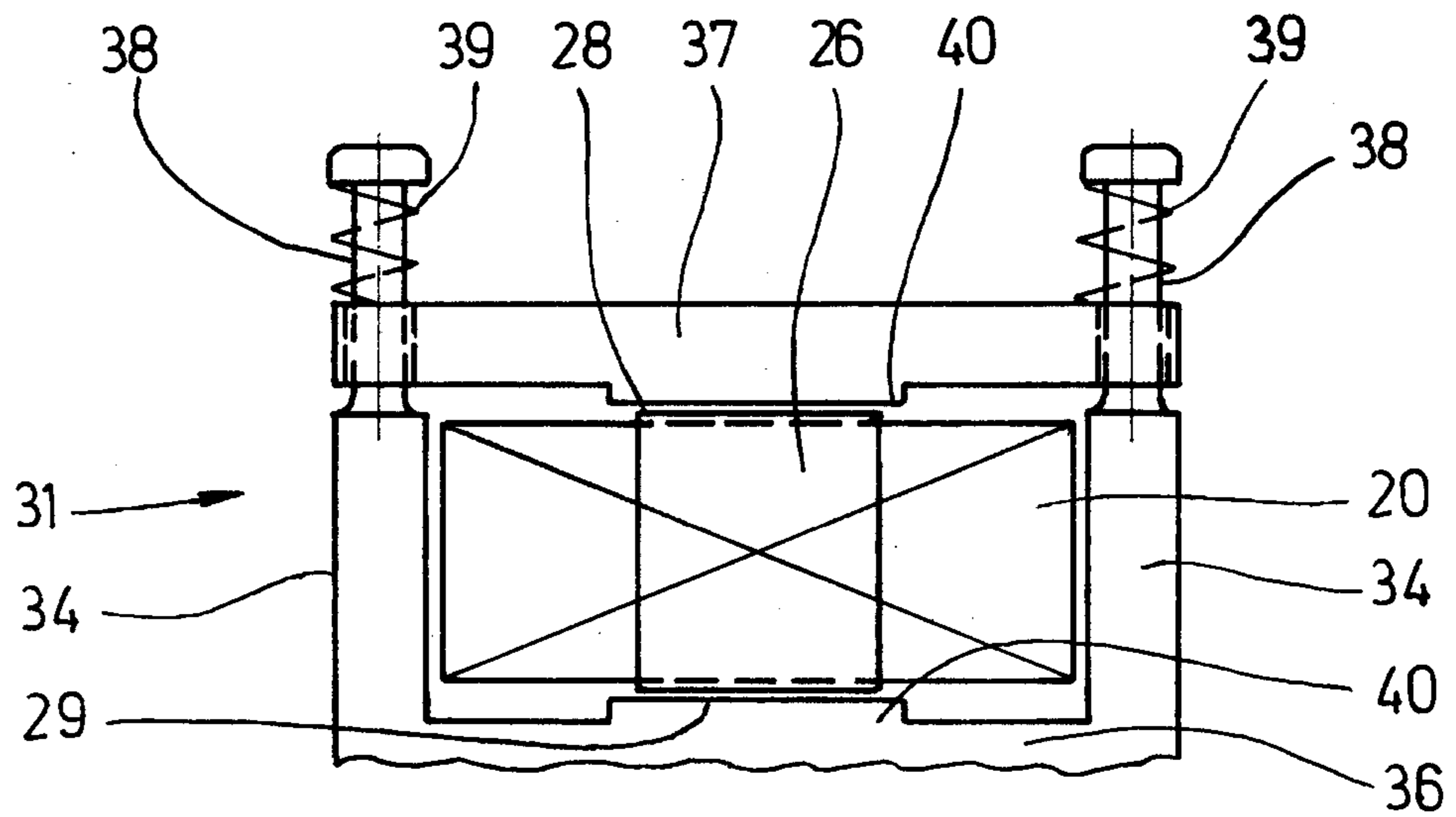


FIG.11

