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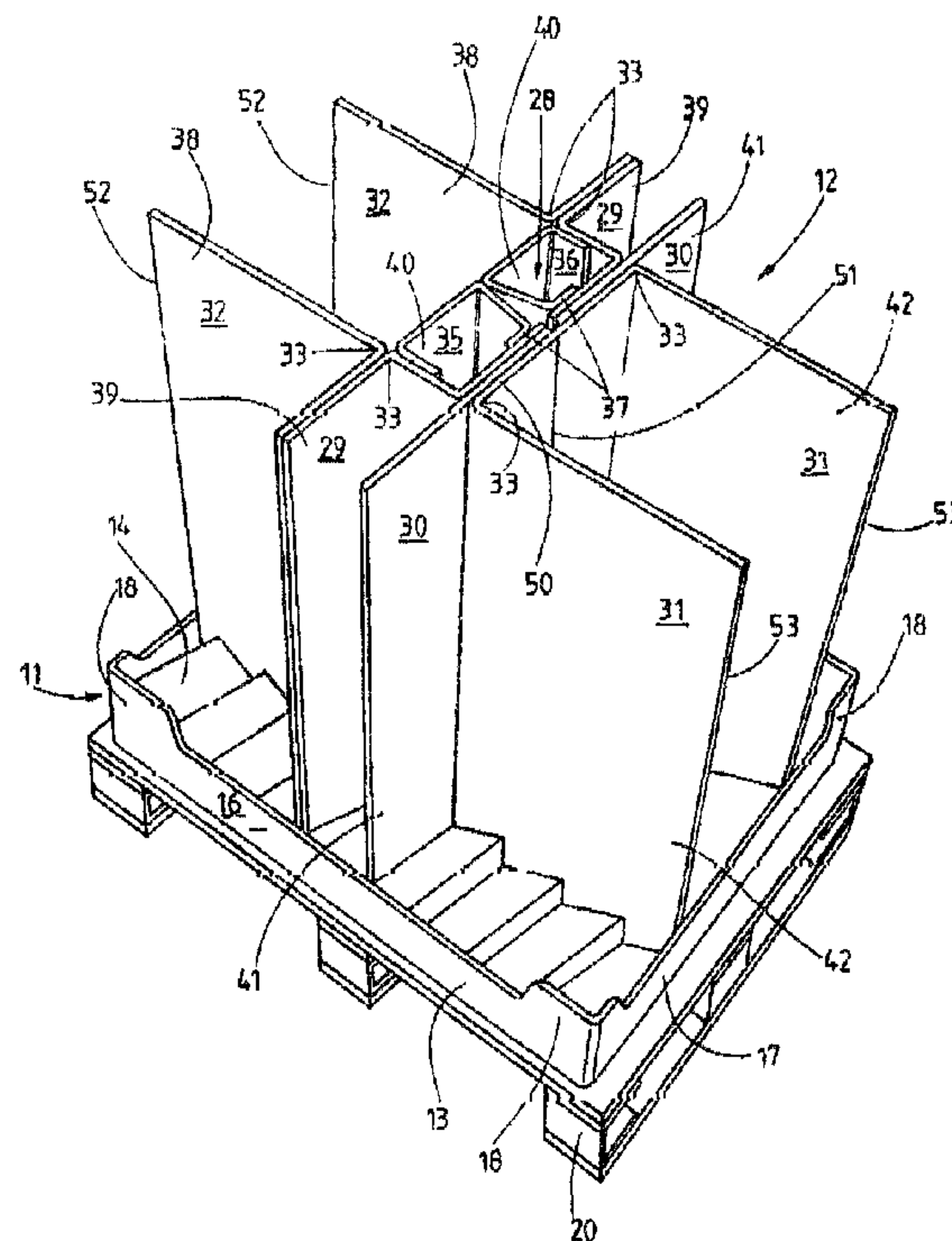
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(54) Title: PACKAGING CONTAINER FOR HOLDING A PLURALITY OF ARTICLES



(57) Abrégé/Abstract:

A packaging container for holding a plurality of articles. Packaging containers of this kind serve as transport and display means for a plurality of packed articles. These articles are sold directly from the packaging container. The empty packaging containers are usually destroyed, because their material and their structure do not permit repeated usage. The invention is concerned with providing a reusable packaging container of this kind. The described packaging container comprises a base part (11) and a stack top (12) which is releasably connected to the base part (11) and which can be collapsed and/or folded together, preferably in such a way that the collapsed or folded stack top (12) can be placed on tire base part (11). As s result, empty packaging containers can be returned in a space-saving manner and, if required, they can be refilled, which means they are reusable. The packaging container according to the invention is particularly suitable for holding several stacks of superposed packs of confectionery, particularly chocolate bars (10).

ABSTRACT OF THE DISCLOSURE

A packaging container for holding a plurality of articles. Packaging containers of this kind serve as transport and display means for a plurality of packed articles. These articles are sold directly from the packaging container. The empty packaging containers are usually destroyed, because their material and their structure do not permit repeated usage. The invention is concerned with providing a reusable packaging container of this kind. The described packaging container comprises a base part (11) and a stack top (12) which is releasably connected to the base part (11) and which can be collapsed and/or folded together, preferably in such a way that the collapsed or folded stack top (12) can be placed on the base part (11). As a result, empty packaging containers can be returned in a space-saving manner and, if required, they can be refilled, which means they are reusable. The packaging container according to the invention is particularly suitable for holding several stacks of superposed packs of confectionery, particularly chocolate bars (10).

PACKAGING CONTAINER FOR HOLDING A PLURALITY OF ARTICLES

2

BACKGROUND OF THE INVENTION

4 The invention relates to a packaging container for
holding a plurality of articles such as chocolate bars
6 which comprises a base part and a stack top.

Packaging containers of this kind are known in the
8 art as shop display containers. They serve as transport
and display means for articles, particularly for packaged
10 confectionery such as chocolate bars, which are arranged
inside the container in the form of several stacks.
12 These goods are delivered inside the packaging containers
to retailers and are sold to customers directly out of
14 these containers.

In general, prior art packaging containers of this
16 kind only permit a single use. Consequently, the
packaging containers have to be disposed after the goods
18 have been sold.

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1 The pallet-like packaging containers are quite large which
means that their disposal creates a considerable amount of
waste.

5 SUMMARY OF THE INVENTION

The invention is therefore based on the object to provide a
packaging container of the afore mentioned kind which is
easily reusable.

10

To attain this object, a base part and a stack top of the
packaging container are releasably connected to one another
and the stack top is collapsible or foldable. Since the
stack top can be taken off the base part, the base part
15 itself, which only requires relatively little space, can be
easily returned in order to be used again. Since the stack
top can be collapsed and erected, it can also be returned
without the loss of space and can then be reconnected to
the base part. Thus, the whole packaging container is re-
20 usable.

According to a preferred embodiment of the invention, the
stack top is collapsible or foldable in such a way that the
surface area of the collapsed or folded stack top approxi-
25 mately corresponds to the surface area of the base part,
and preferably, it is slightly smaller. Thus, the collapsed
or folded stack top can be placed on or into the base part
and the complete packaging container can be returned with-
out the loss of space.

30

According to the invention, the stack top comprises several
vertical partition walls. Some of these partition walls are
pivotable about at least one preferably central (hollow)
column. The column stabilizes the stack top and facilitates
35 a pivoting of the partition walls in order to collapse
and/or fold the stack top. Erecting the stack top is also
facilitated by the column.

1 The column is preferably formed from two side-by-side part
columns which are joined to one another in such a way that,
starting from their confronting sides, the two part columns
can be pivoted away from one another in order to fold to-
5 gether the stack top. In this process, the two part columns
are collapsed, i.e. they lose their three-dimensional
shape and assume a flat shape which only requires minimum
space.

10 The part columns are joined to one another via two sides,
which are located in juxtaposition in a common plane, by
means of a portion of the stack top which forms two
partition walls. This portion of the stack top also com-
prises a center folding line which forms a center hinge
15 axis. This axis is located between the juxtaposed side
faces of the interconnected part columns and allows to
centrally fold together the collapsed stack top (approx-
imately in a V-shaped manner). As a result, the surface area
of the collapsed or folded stack top can be halved.

20 Expediently, the unfolded or erected stack top is connected
to the base part via at least one plug connection. This
connection is preferably formed from depressions which
correspond to the outlines of the stack top. Thus, lower
25 edge portions of the stack top can be easily and reliably
inserted into the base part in a positive manner.

Within the base part, there are supports for the articles
which are to be stacked up against the partition walls of
30 the stack top. These supports downwardly incline towards
the center column so that the articles are pressed against
the partition walls of the stack top or the column. Con-
sequently, the incline of the supports ensures that the
articles which are stacked on top of one another are
35 securely held in the packaging container. Even relatively
high stacks of superposed articles can not collapse and
fall out of the container.

1 The larger supports are divided into several support sur-
face parts whose surface area preferably corresponds to
that of a stack of articles which are to be arranged on top
of one another. On the one hand, this results in an im-
5 bricated arrangement of the articles of individual side-by-
side stacks, which increases the stability of the stacks,
while, on the other hand, the inclined arrangement of the
support surface parts only creates a small wasted space in
the form of a cavity underneath the supports.

10 According to a preferred embodiment of the invention, the
base part comprises an outer portion and at least one inner
portion. Such a base part is particularly easy to manu-
15 facture, because the separate inner portion can be easily
provided with the inclined supports or support surface
parts for the articles which are to be stacked in the
packaging container. Moreover, the depressions in which the
unfolded stack top is to be inserted can be formed in the
20 inner portion by simple longitudinally and transversely
directed slots. The inner portion can have a single-piece
or a multi-piece structure. In the case of a multi-piece
inner portion, the individual parts extend in those regions
of the base part which are either located between two
25 parallel partition walls or between two partition walls
which are located at right angles to one another (in corner
regions of the packaging container).

30 It is another essential feature of the invention that the
whole packaging container is made of a durable material
which allows a repeated use of the container. Preferably,
the base part as well as the stack top are made of plastic,
preferably of a thermoplastic material. This choice of
material makes the packaging container according to the in-
35 vention particularly durable and thus near enough infinite-
ly reusable. Moreover, the packaging container according to
the invention can be manufactured particularly easy by
means of deep-drawing, injection molding and/or by means of
cutting its portions out of semi-finished sheets.

BRIEF DESCRIPTION OF THE DRAWINGS

A preferred embodiment of the packaging container according to the invention will be described below in detail with reference to the drawings, in which:

FIG. 1 is a perspective view of a packaging container arranged on a pallet, shown in an erected but empty condition,

FIG. 2 shows the packaging container of FIG. 1 in a disassembled condition in which the stack top is folded together,

FIG. 3 is a top plan view of a base part of the packaging container,

FIG. 4 is a section of the base part of FIG. 3, taken along the line IV-IV,

FIG. 5 is a section of the base part of FIG. 3, taken along the line V-V,

FIG. 6 is a perspective view of a stack top of the packaging container, shown in a partially folded condition, and

FIG. 7 is a top plan view of the partially folded stack top, on an enlarged scale.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The invention relates to a packaging container in the form of a reusable shop display. Articles such as chocolate bars are packed in the container and delivered to retailers where they are directly sold to customers from the container. The packaging container is designed such that it can hold several stacks of a plurality of superposed choco-

1 late bars 10. The outer sides of the packaging container
are open and offer easy access to the chocolate bars 10
packed therein (FIG. 1).

5 The packaging container comprises a base part 11 and a
collapsible stack top 12 which is releasably connected
thereto.

10 In the packaging container illustrated in the drawings, the
base part 11 is made from two portions, specifically an
outer portion 13 and an inner portion 14.

15 The outer portion 13 of the base part 11 has the shape of a
box with low rims and an open top. Accordingly, the outer
portion 13 has a closed bottom 15 which in this case has a
rectangular surface area and (low) side panels 16 and trans-
verse panels 17 adjoining the edges of the bottom 15. These
panels are at right angles to the bottom 15 and completely
surround this bottom 15. Corner portions of the side panels
20 16 and transverse panels 17 are upwardly extended in order
to form stacking corners 18 (FIG. 1). Projections 19 which
correspond to the stacking corners 18 are arranged under-
neath the bottom 15. In the present embodiment, the pro-
jections 19 are in the form of L-shaped ribs which are set
25 back relative to the edge of the bottom 15 by the panel-
thickness of the stacking corners 18 (FIGS. 4 and 5). As a
result, several base parts 11 can be stacked on top of one
another, such that, on the one hand, the projections 19
and, on the other hand, the stacking corners 18, form a
30 lock which secures the stacked base parts 11 against trans-
versely directed relative displacements. Moreover, the pro-
jections 19 underneath the bottom 15 of each outer portion
13 secure the packaging container with its base part 11 on
a standardized pallet 20 (FIG. 1) against displacements.
35 For this purpose, the projections 19 enter depressions in
the top side of the pallet 20.

1 The inner portion 14 is formed like an insert which is
placed inside the outer portion 13 and is positively held
therein between the side panels 16 and transverse panels
17. The inner portion 14, which in the present embodiment
5 is in the form of a single piece, is provided with con-
tinuous grooves extending from one side to the other,
particularly with two parallel longitudinal grooves 21 and
two parallel transverse grooves 22 (FIG. 3). These grooves
divide the surface area of the inner portion 14 into alto-
10 gether nine fields 23 to 26. The bottom of the longitudinal
grooves 21 and transverse grooves 22 is defined by webs 54.
These webs 54 connect the fields 23 to 26 of the inner
portion 14 so that they form a single piece. The fields 23
to 25 form support surfaces for one or more stacks of choco-
15 late bars 10. In the illustrated embodiment, each of the
four identical corner fields 23 serves for holding four
stacks, such that the longitudinal sides of the chocolate
bars 10 abut one another. Each of the two fields 24 serve
for holding six stacks which are located side-by-side and
20 behind one another. Two small fields 25 hold one stack
each. A center field 26 is surrounded by the outer fields
23, 24, 25 and remains free, i.e. it is not packed with
articles, since it offers no access to the chocolate bars
10 (FIG. 3).

25 The supports of the fields 23, 24, 25 of the inner portion
14, on which the stacks of superposed chocolate bars 10
rest, incline towards the bottom 15 of the base part 11.
This incline has been selected such that it is directed
30 towards the flat bottom of the center field 26. As a re-
sult, the chocolate bars 10 in the packaging container are
slightly inclined towards the center field 26, which pre-
vents the stacks of superposed chocolate bars 10 from shift-
ing towards the open outer sides of the packaging container
and toppling over. The supports of the fields 24 have a
35 continuous surface which is downwardly inclined towards the
center field 26. The supports of the corner fields 23, on
the other hand, are arranged in an imbricated manner. In

1 particular, the supports of the fields 23 are formed from
four consecutive support parts 27, each supporting one
stack of superposed chocolate bars 10. Each support part 27
downwardly inclines towards the field 25, which gives the
5 fields 23 a saw-toothed profile section (FIGS. 1 and 4).
Moreover, the surface parts continuously incline towards
the fields 24. As a result, the support parts 27 are on the
whole directed towards the respective corner of the center
field 26, so that the stacks of superposed chocolate bars
10 are held in a stable manner even in the corner fields
23.

The stack top 12 can not only be taken off the base part 11
but can also be collapsed or folded together thereafter.
15 For this purpose, the stack top 12 comprises a center
column 28 whose surface area corresponds to the surface
area of the field 26. A partition wall 29, 30, 31 and 32
extends each side of the center column 28 at opposite ends.
Altogether, the center column 28 is connected to four pairs
20 of partition walls 29, 30, 31 and 32. According to the in-
vention, the partition walls 29, 31, 32 are pivotable. In
particular, they are hinged to the center column 28 by
means of vertical hinge axes 33. The two partition walls
30, on the other hand, are rigidly joined to the center
25 column 28. The partition walls 30 and the side of the
center column 28 located between these two walls 30 form a
folding surface 34. The pivotable partition walls 29, 31
and 32 which are hinged to the center column 28 can be
moved against this folding surface 34 in order to collapse
30 or fold together the stack top 12 (FIGS. 1 and 6).

The longitudinal grooves 21 and transverse grooves 22 in
the inner portion 14 are defined such that their width and
length corresponds to the outlines of the partition walls
35 29 to 32, so that the unfolded stack top 12 can be inserted
into the longitudinal grooves 21 and transverse grooves 22
of the inner portion 14 from above.

1 It is an essential aspect of the invention that the center
column 28 is centrally divided. For this purpose, the
center column 28 comprises two hollow part columns 35 and
36 of equal size. The part columns 35 and 36 are joined to
5 one another via two confronting vertical corners 37, i.e.
via a corner 37 of the first part column 35 and an adjacent
second corner 37 of the second part column 36 (FIGS. 1 and
6).

10 The illustrated stack top 12 is formed from altogether nine
blanks which are durably connected to one another. Eight
blanks are formed from four pairs of different types of
blanks 38, 39, 40, 41, while there is only a single fifth
blank 42. The structure of the blanks 38 to 42 will be de-
15 scribed in the following in detail with reference to the
partially unfolded stack top (FIGS. 6 and 7):

Each part column 35 and 36 is formed from the blank 40 and
a portion of the blank 39. The blank 40 is bent in an
20 L-shaped manner, while the blank 39 extends in the form of
a double-L or a Z. The L-shaped blank 40 forms two panels
43, 44 of the respective part column 35, 36, while two per-
pendicular legs of each blank 39 form the other two panels
45 and 46 of each part column 35, 36. The free ends of the
25 legs of blank 40 which form the panels 43 and 44 are pro-
vided with connecting flaps 47 and 48. These flaps 47, 48
connect the panels 43 and 44 of the blank 40 with the
panels 45 and 46 of the blank 39. A third leg of the blank
39 forms one half of the partition wall 29. A second half
30 of this partition wall 29 is formed from a connecting flap
49 of the L-shaped blank 38. This connecting flap 49 com-
pletely overlaps the first half of the partition wall 29
and is connected thereto. A second leg of the blank 38 ex-
tends perpendicular to the connecting flap 49 of each blank
35 38 and forms a partition wall 32. The panels 45 of the part
columns 35 and 36 are located next to one another in one
plane and are each connected to a flat blank 41 in such a
way that each blank 41 completely overlaps the panel 45 of

1 the respective part column 35 or 36. Moreover, each blank
41 projects from the respective part column 35, 36 at both
ends in order to form the partition walls 30. The blank 42
is formed in a U-shaped manner. As a result, two parallel
5 legs of the blank 42 form parallel partition walls 31 of
equal size. A web 50 of the blank 42 connects the partition
walls 31 to one another. This web 50 corresponds in width
to the side-by-side part columns 35 and 36 and overlaps the
sections of the blank 41 which abut the part columns 35,
10 36. A vertical center hinge axis 51 centrally extends
across the web 50 of the blank 41. This axis allows to fold
the part columns 35 and 36 away from one another in the
region of their corners 37 and to halve the overall surface
of the collapsed or folded stack top 12.

15 The stack top 12 is collapsed by means of pivoting in-
dividual sections of the blanks 38, 39, 40 and 42 about
their hinge axes 33 or the center hinge axis 51. The hinge
axes 33 and the center hinge axis 51 are formed in the
20 blanks 38, 39, 40 and 42 by embossing or the like, so that
the blanks can be easily pivoted in a well-defined manner.

The stack top 12 is collapsed or folded together in the
following way (FIGS. 6 and 7):

25 After the stack top 12 has been released from the base part
11, the Z-shaped blanks 39 are spread out flat by means of
pulling their free ends. The blanks 39 are thus placed
against the blanks 41 which are located in the folding
30 plane 34 and which remain flat even in the erected state of
the container. In this process, the blanks 40 are deformed
such that the part columns 35 and 36 are spread out flat.
Subsequently, the oppositely located partition walls 32 of
the blanks 38 are folded in opposed directions so that
35 their free edges 52 are directed away from one another. In
like manner, the partition walls 31 of the blank 42 are
moved in opposed directions so that their free edges 53 are
located on opposite outer sides of the collapsed stack top

1 12. Thereafter, the collapsed stack top 12 is again folded
in a V-shaped manner about the center hinge axis 51 in
order to halve its surface area. The dimensions of the
blanks 38 to 42 of the stack top 12 are defined such that
5 in the folded or collapsed state, the stack top 12 has a
rectangular surface area which corresponds to the inside
dimension of the outer portion 13 of the base part 11.
Thus, the folded stack top 12 can be placed on the inner
portion 14 of the base part 11 such that it is positively
10 held therein. If required, other collapsed packaging con-
tainers can then be placed with their base parts 11 on the
stacking corners 18 of the bottom base part 11, so that a
plurality of empty collapsed packaging containers can be
returned in a space-saving manner to the place where they
15 are filled.

Alternatively it would be possible to dispense with the
connecting flaps 47 to 49 and the web 50 and to directly
hinge the partition walls 29 to 32 to the respective
20 corners of the part columns 35 and 36, for example by means
of hinge straps which are glued to corner portions and form
hinge axes 33. In this case, the center hinge axis 51 is
also formed from a hinge strap which directly joins the con-
fronting edges 37 of the part columns 35 and 36.

25 It is another essential aspect of the invention that the
whole packaging container is made of plastic, preferably of
a thermoplastic material. For this purpose, the outer
portion 13 of the base part 11 is preferably made by in-
30 jection molding, whereas the inner portion 14 of the base
part 11 is preferably made by deep-drawing. Alternatively,
the outer portion 13 could also be made by deep-drawing.
The blanks 39 to 42, on the other hand, are preferably cut
from a sheet-like plastic material. The hinge axes 33 and
35 the center hinge axis 51 are embossed so that they form
hinges. The blanks 39 to 42 are interconnected via their
connecting flaps 47 to 49 by means of glueing, welding or
the like.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A packaging container for holding a plurality of articles, comprising:

a base member; and

a top member releasably connectable to the base member and including a multitude of blanks having a plurality of partition walls, and a plurality of connecting flaps connecting the blanks together,

the top member being foldable between

i) a first folded position in which the top member has a generally flat shape, and

ii) an open position in which the blanks of the top member form a central vertical column, and the partition walls of the blank form a plurality of compartments for receiving the articles;

wherein the blanks are connected together for pivotal movement relative to the central vertical column; and one of said blanks includes a central hinge axis, and the blanks are foldable about said central hinge axis from said first folded position and into a second folded position in which the top member also has a generally flat shape; and

wherein when the top member is in the first folded position, the top member has a given surface area; and

when the top member is in the second folded position, the top member has a surface area approximately half said given surface area.

2. A packaging container according to claim 1, wherein:

the base member forms an interior; and

when the top member is in the second folded position, the top member fits in the interior of the base member.

3. A packaging container according to claims 1 or 2,

wherein:

the central vertical column has left and right vertically extending sides; and

the hinge axis is substantially vertical and is laterally located approximately midway between the left and right sides of the central vertical column.

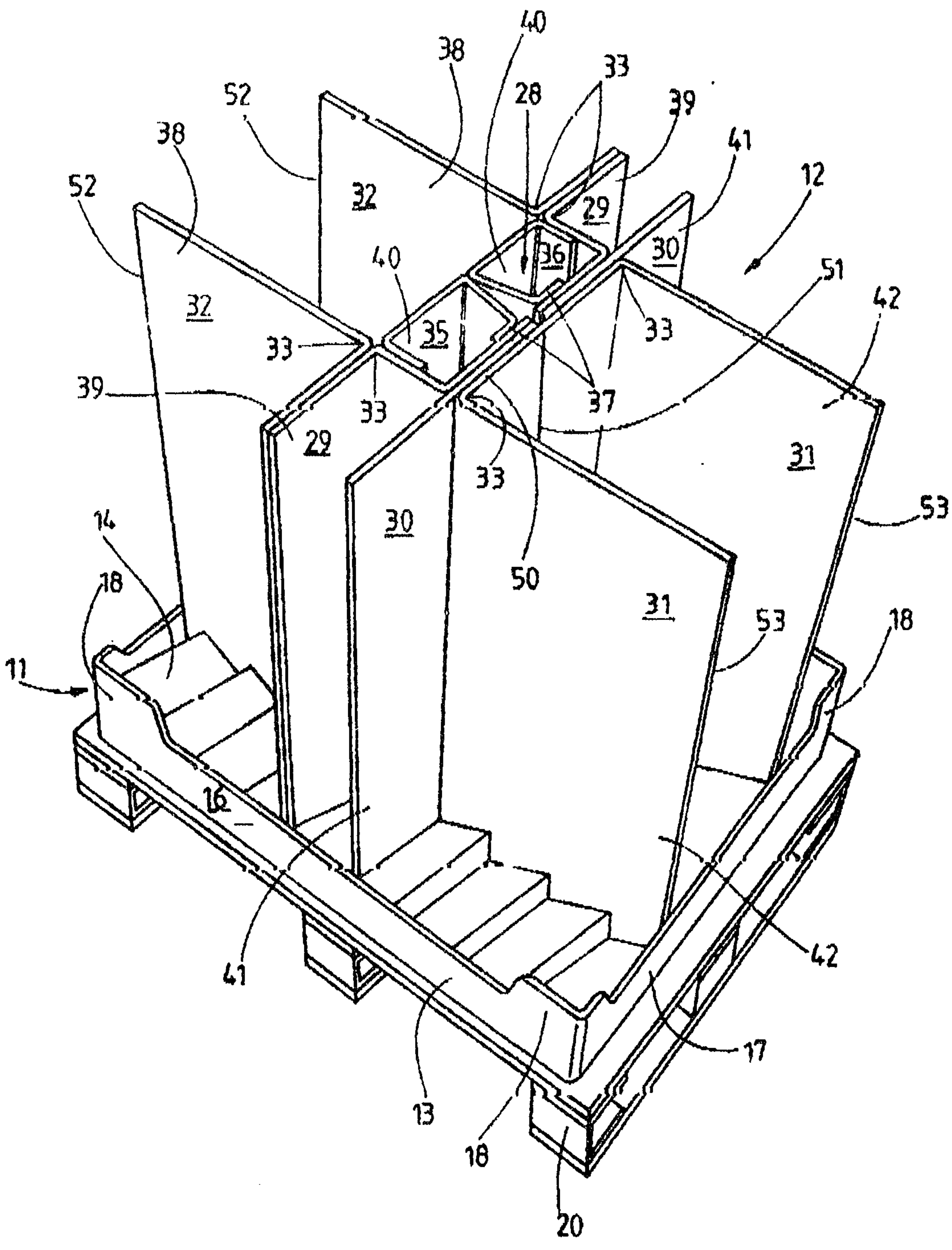


Fig. 1

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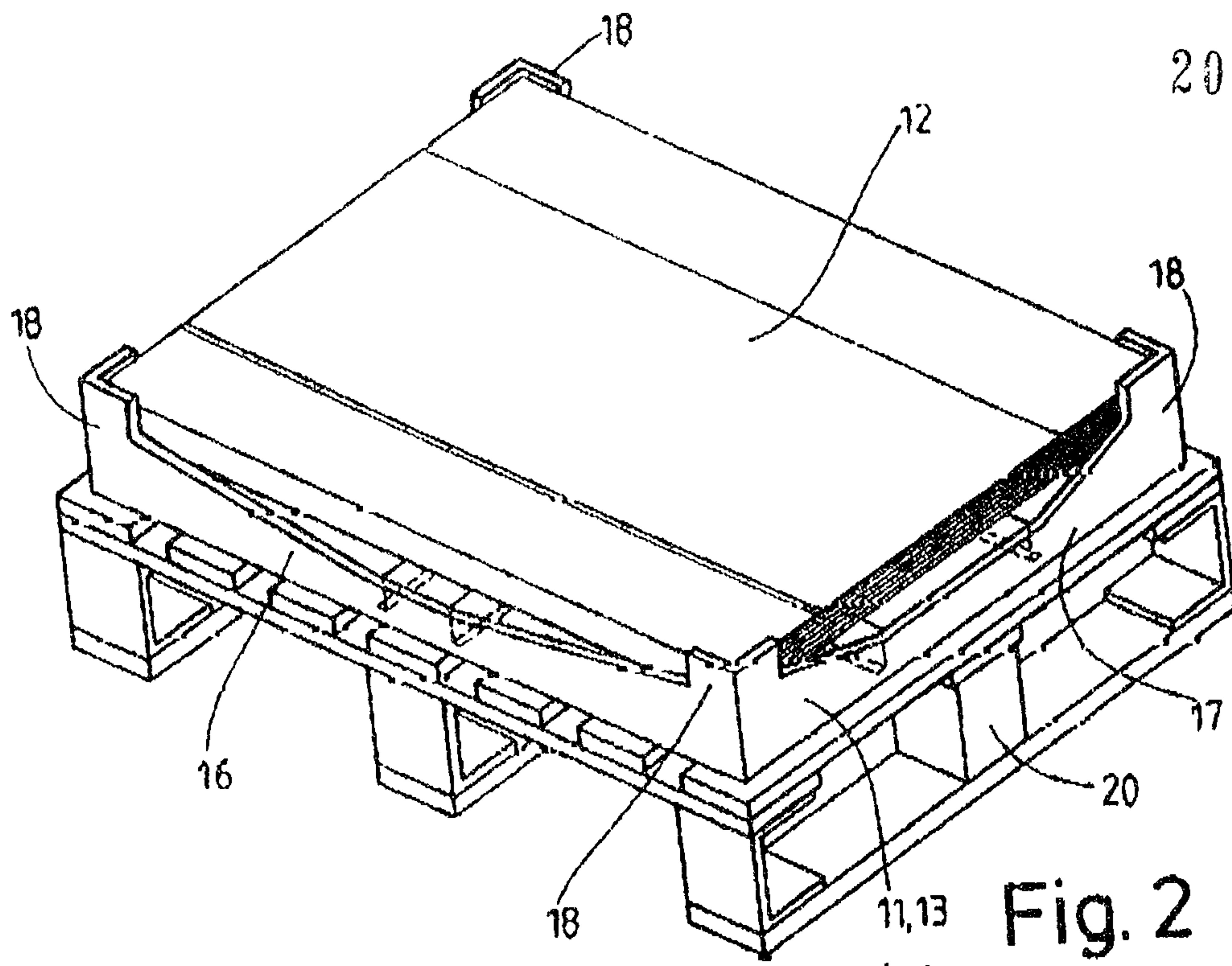


Fig. 2

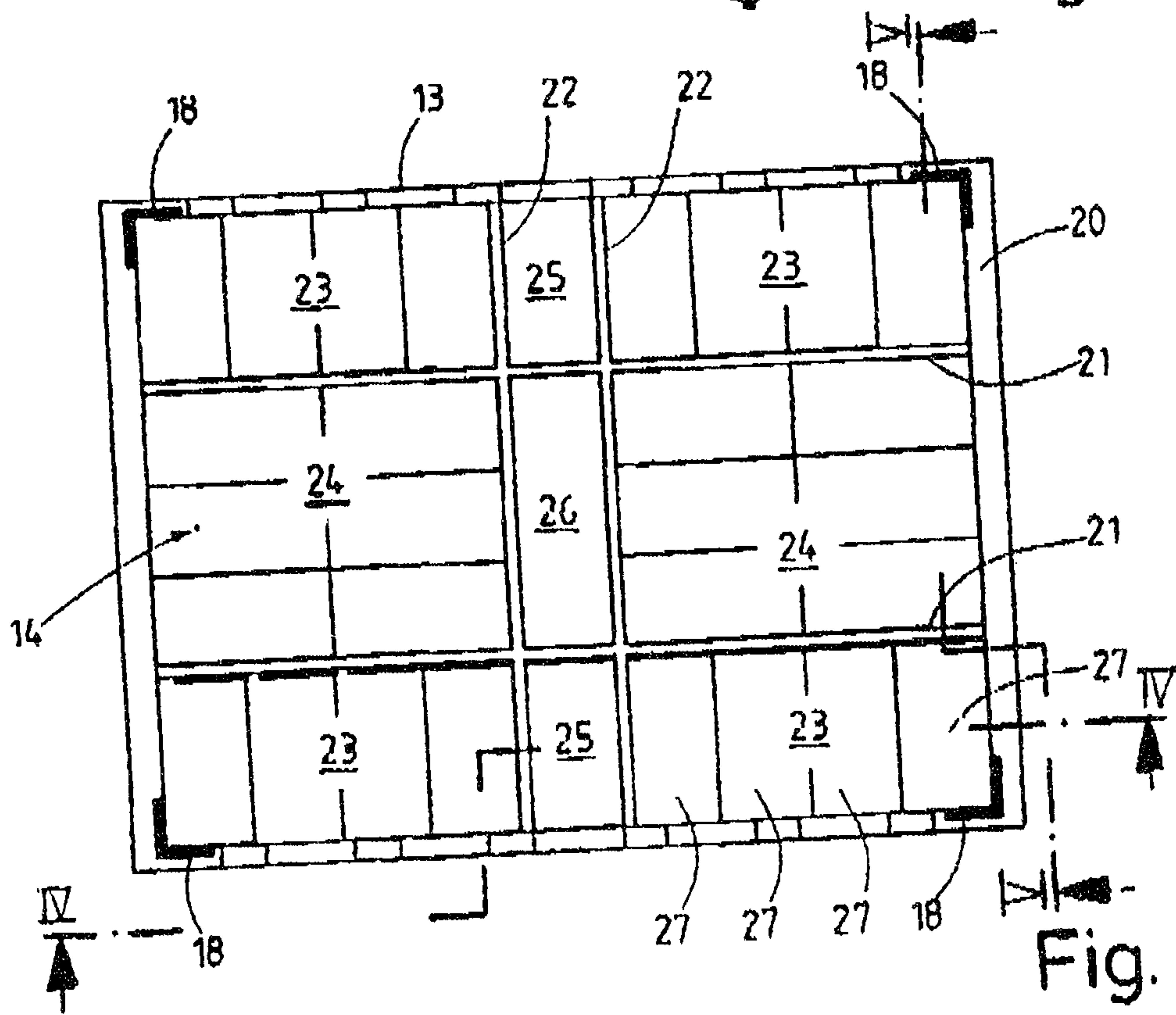


Fig. 3

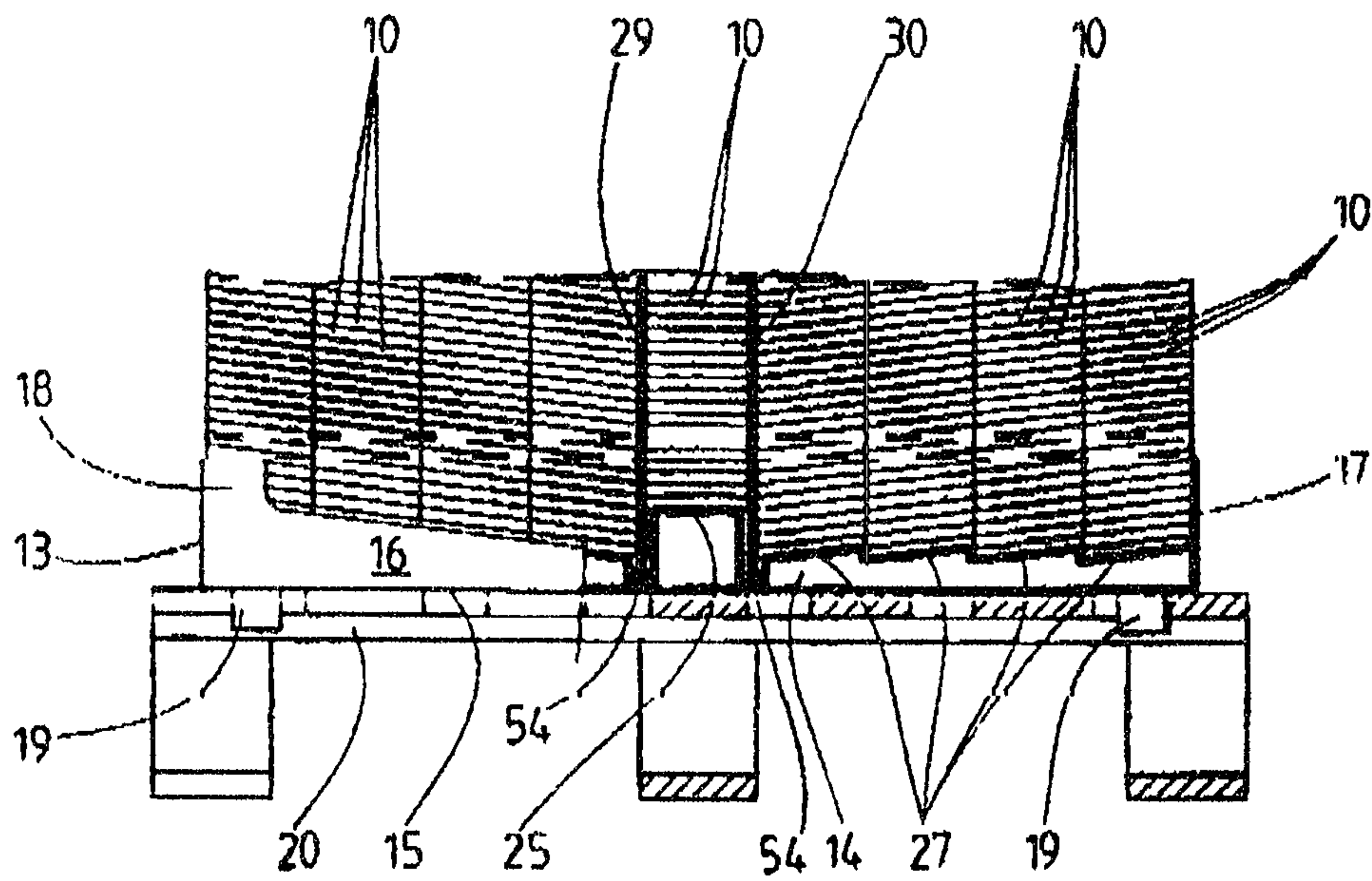


Fig. 4

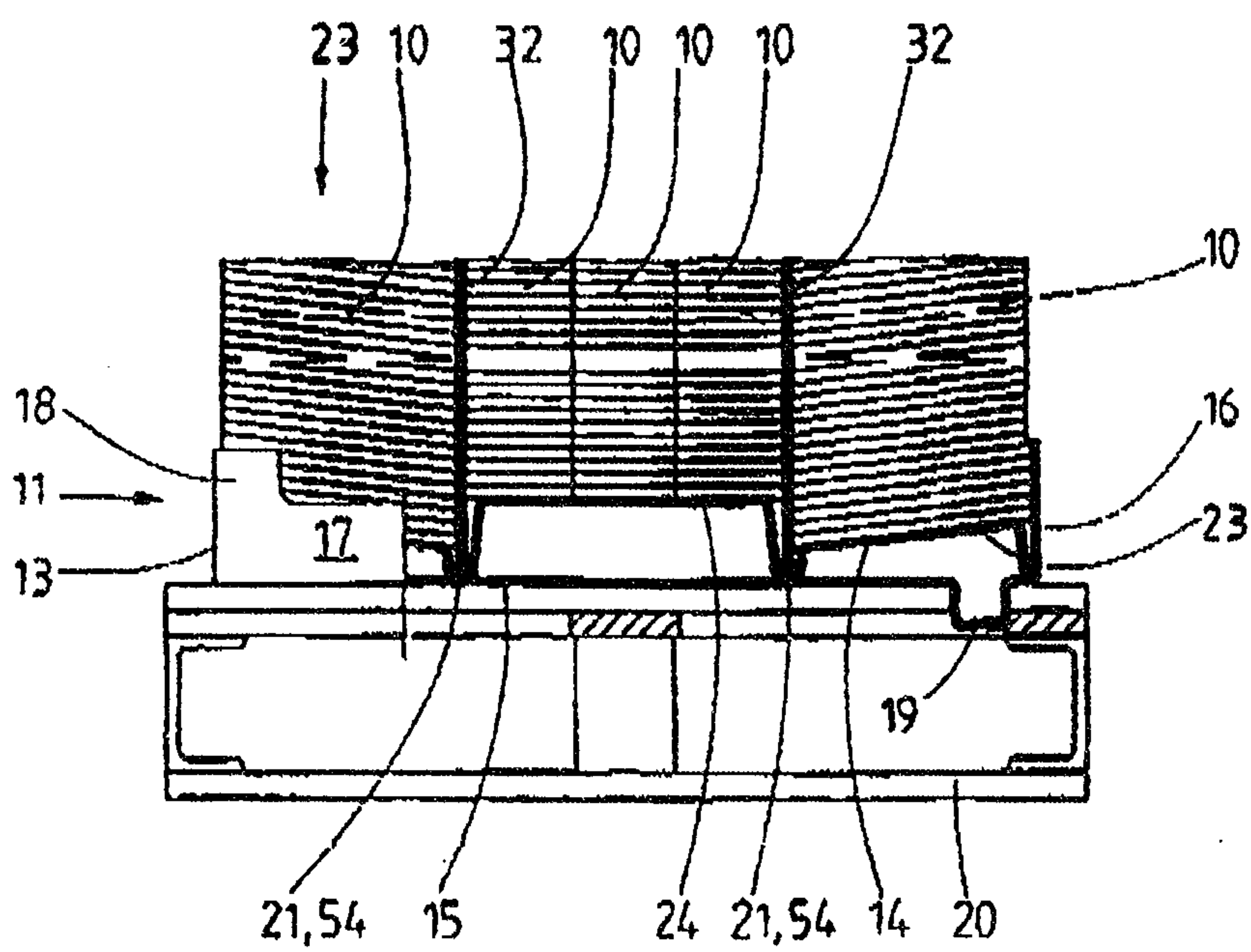
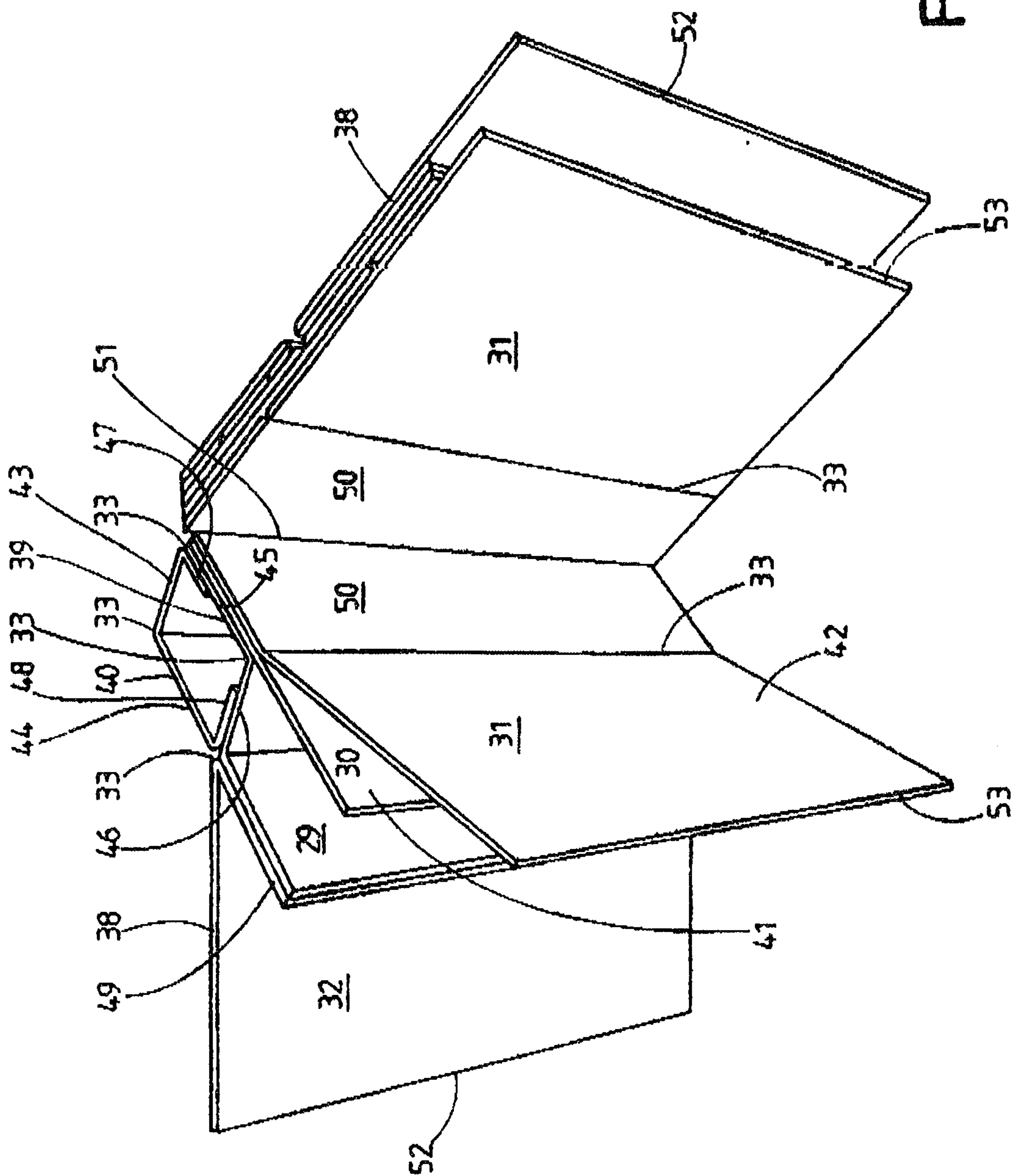


Fig. 5

Fig. 6



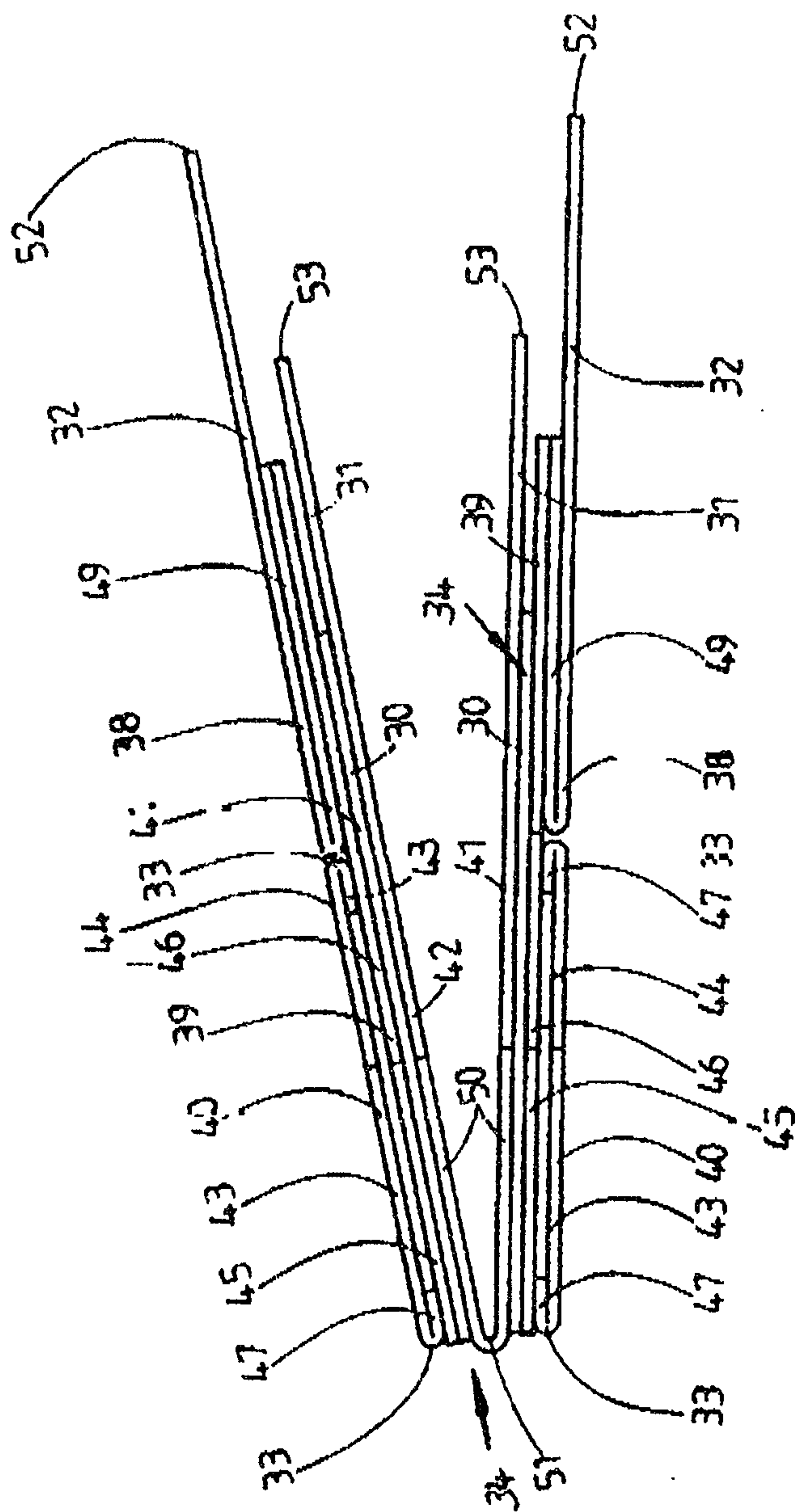


Fig. 7

