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Description

1. Technical area

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The present application relates to a mobile camping unit for use in cabins of closed vehicles, as disclosed, for example, in DE 197 56 134 A1.

2. Prior art

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Various kitchen block and bed and cabinet systems are available for using vehicles for camping purposes. One disadvantage of these solutions is that they are permanently installed in the vehicle or at least have to be fixed using screws or via vehicle-specific rail systems to be able to be used. This restricts the usage possibilities of the vehicle for other purposes either permanently or at least requires a high level of refitting effort for different usage purposes.

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A kitchen block, in particular for installation in small buses or mobile homes, which is mounted on rails fastened on the vehicle floor, is known from DE 8611375 U1. This device has the disadvantage that the installation is linked to a high level of construction effort and the usage possibilities of the vehicle are permanently restricted.

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DE 202004011970 U1 describes an item of camping built-in furniture for a motor vehicle, which is composed of multiple modules, which are each removably fastenable in the motor vehicle per se and independently of one another and each contain at least one item of kitchen equipment and/or at least one item of camping equipment. For use as a couch surface, DE 202004011970 U1 provides that the height of the camping built-in furniture corresponds to the height of a couch surface when the seats of the motor vehicle are collapsed. The solution has the disadvantage that providing a couch surface requires a correspondingly configured motor vehicle interior and has to be adapted thereto. Furthermore, in this solution, camping equipment and couch surface do not

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form a functional unit, whereby the installation and removal and the transportation are made more difficult.

5 A base frame for a camping bed for temporary installation in a motor vehicle is known from DE 202007014666 U1, which has a first and a second stand element having one or more longitudinal struts located in between, wherein the support surface is formed by the second stand element and the longitudinal strut or struts. The device has the disadvantage that the longitudinal struts are designed as static and therefore occupy a substantial amount of space. Furthermore, DE 202007014666 U1 provides that the
10 base frame is disassembled into multiple individual parts for transport, which makes setup and breakdown relatively complex.

A base frame for a camping bed for a vehicle with bench seat with collapsible backrest part is known from DE 202009007234 U1, which has a couch surface composed of at
15 least one segment, wherein a first segment of the couch surface has fastening means for fastening the segment on the collapsible backrest of the bench seat. The device has the disadvantage that no further usable space for camping needs is provided except for the couch surface. Furthermore, it has the disadvantage that a correspondingly configured vehicle interior is required for use. The device according to DE
20 202009007234 U1 can also be constructed independently of a backrest, but its structural construction is relatively complex as a result of the alternative possible uses.

3. Description of the invention:

25 The invention is based on the object of providing a camping unit with usable space and couch surface, which avoids the described disadvantages. In particular, it is to be made possible to provide a camping unit which is usable as universally as possible, i.e., for different vehicle types, the usage of which does not require complex setup or installation.

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The object is achieved according to the invention by a camping unit according to claim 1, advantageous embodiments are described in the dependent claims.

The foundation of the invention is formed by a mobile camping unit with usable space
5 and couch surface and a substantially rectangular base surface, wherein the usable
space is located in the lower region and the couch surface is located in the upper region
of the camping unit, the couch surface is segmented and can be converted from a
transport state, in which all segments of the couch surface are disposed above one
another, substantially congruent with the base surface of the camping unit, into a usage
10 state, in which the segments of the couch surface are disposed within a plane at the
level of the upper region of the camping unit, and the couch surface in the usage state
is disposed at one end substantially congruent to the base surface of the camping unit
and is supported or suspended at the opposite end by at least one additional means.
The height of the mounting point of the couch surface on or within the camping unit is
15 selected in this case so that it is disposed sufficiently high that in the usage state it
protrudes above a bench back present in the cabin of the vehicle, for example, when
the bench back is collapsed. For this purpose, the couch surface preferably forms the
upper end of the camping unit. The usable space located under the couch surface is
used for accommodating the further functional camping utensils and devices. The
20 usable space can be used independently of the couch surface, i.e., the couch surface
can also remain in the transport state in this case.

The camping unit according to the invention has the advantage that it is universally
usable for greatly varying vehicle types and does not require a special embodiment of
25 the vehicle interior. In the usage state, the couch surface is positioned at its one end on
the camping unit and is supported or suspended at its opposite end by at least one
additional means. Retaining loops or collapsible feet are suitable as such means, for
example. Therefore, it does not require any additional support devices inside the vehicle
cabin, for example, a collapsed bench back, but rather is usable independently thereof.
30 Due to the compact embodiment, in which usable space and couch surface share the
same base surface both in the transport state and also in the usage state, the space is

optimally utilized. Because the couch surface forms a functional unit with the camping unit, the camping unit can be easily transported, set up, and broken down again.

- 5 A mechanism, which is simple to produce and use, for conversion of the segments of the couch surface from the transport state into the usage state is achieved in that a first segment of the couch surface is fixedly or detachably mounted as the upper face of the camping unit and the segments respectively adjoining in one direction are in each case articulated with at least one hinge or pivot joint such that the segments of the couch surface, in the transport state, are disposed flat above one another, substantially
- 10 congruent with the base surface of the camping unit and, in the usage state, are disposed as a planar couch surface. For this purpose, the hinges or pivot joints located between the segments have a degree of freedom of 180° in each case with alternating reverse orientation.
- 15 Particularly universal usability of the camping unit is ensured in that it is designed substantially as a cuboid and the edge lengths of its base surface are at most 1200 x 800 mm. This corresponds to the size specifications standardized by DIN EN 13698 part 1 for the base surface of reusable transport pallets, to which many vehicle produces are oriented in the design of vehicle cabins, in particular in utility vehicles. The
- 20 most extensive possible usability is ensured by maintaining these size specifications. With some vehicle types, this furthermore enables positioning of the camping unit with its long side transverse to the vehicle direction, whereby a use of the couch surface in the usage state is ensured for average body lengths of up to 2 m even in relatively short vehicle types.
- 25 In the above embodiment, the couch surface in the usage state is preferably arranged disposed in the longitudinal direction transversely to the long side of the camping unit and is divided into three segments, which represents an effective spatial embodiment.
- 30 An improved usage capability is ensured in that the segments of the couch surface are fixedly or detachably upholstered. A mattress or the like does not have to be separately

purchased and mounted. In addition, the number of individual parts required for use is reduced, which further improves the handling ability of the device.

5 The usable space of the mobile camping unit is preferably formed with at least one hotplate, at least one water tank with a tap, and at least one basin positioned below the tap of a water tank. This represents a practical combination of the functional utensils and devices typically required for camping.

10 A particularly practical functional unit is achieved in that the usable space of the camping unit can also be converted from a transport state, in which the usable space of the camping unit is formed substantially as a closed cuboid, into a usage state, in which the hotplate is disposed outside the usable space. This embodiment ensures, on the one hand, good transportability as a closed cuboid. At the same time, the hotplate is located in the usage state outside the usable space of the camping unit, wherein, on the
15 one hand, more space is available during usage and, on the other hand, escape without problems of the heat and the exhaust air emitted from the hotplate is ensured.

In the above-described embodiment, an easily producible and usable mechanism for conversion of the hotplate from the transport state into the usage state is achieved in
20 that the hotplate is designed as a drawer for conversion from the transport state into the usage state.

The device according to the invention will be described in greater detail hereafter with reference to the appended drawings on the basis of an exemplary embodiment:

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Figures 1 to 7 show an exemplary camping unit 1 in various views. Figure 1 shows the camping unit 1 in the transport state as a side view. The camping unit 1 is designed essentially as a closed cuboid and has two handles in each case on both sides for its transport, of which the handles 2 and 2' are visible in the side views according to
30 Figures 1 to 3. The couch surface is located in the upper region of the camping unit 1 and is formed from the upholstered segments 3, 3', and 3'', which are disposed above

one another, substantially congruent with the base surface 4 of the camping unit 1, in the transport state. The segment 3 of the couch surface forms the upper face of the camping unit 1 in this case and is detachably mounted thereon. The segments 3' and 3" are in each case articulated with hinges on both sides on the respectively adjoining
5 segment, of which the hinges 5 and 5' are visible in the side view according to Figures 1 to 3, so that the segments of the couch surface are disposed flat above one another, substantially congruent with the base surface of the camping unit, in the transport state and are disposed as a planar couch surface in the usage state. For this purpose, the hinges located between the segments 3, 3', and 3" have a degree of freedom of 180° in
10 each case with alternating reverse orientation. The access to the usable interior of the camping unit 1 is blocked in the transport state by the foldable closure plate 6, which is fastened using hinges, of which only the hinge 7 is visible in the side view according to Figures 1 to 3, and which is locked on its upper end using case locks, of which only the lock 8 is visible in the side view according to Figures 1 to 3. Figures 2 and 3 show the
15 camping unit 1 during the conversion from the transport state into the usage state, wherein the couch surface is completely located in the usage state in Figure 3 and the folded-up closure plate 6 is held by the holding strap 9. Figure 3 illustrates, in a schematic illustration, the positioning of the camping unit 1 with folded-up couch surface in the usage state inside a vehicle cabin with collapsed bench back 10, wherein the end
20 of the couch surface opposite to the base surface 4 is suspended at the segment 3" on both sides using holding loops 11 and 11'. The holding loops are used for fastening on fixed anchor points in the interior of the vehicle cabin, which are located above the couch surface, for example, the safety belt deflection brackets, and thus hold the folded-out couch surface in a load-bearing manner in the horizontal position. Figure 4 shows
25 the camping unit 1 with the hot plates 12 and 12' also located in the usage state, which are positioned inside the extended drawer element 13. The hot plates 12 and 12' are protected in the usage state by a windscreen, which is fastened using hinges 14 and 14' and can be folded up, and which is formed by the rear wall 15 and two side walls 16 and 16'. Since the side wall 16' of the folded-up windscreen adjoins the segment 3 of the
30 couch surface, it is simultaneously used as a formfitting lock for the extended drawer element 13. Figures 5a to 5c show the usable space of the camping unit 1 located

under the couch surface as a schematic front view in a sectional illustration during the folding out of the windscreen. The usable space is equipped with two water tanks 17 and 17', of which the front water tank 17 is formed with a tap 18 embodied as a drain valve. The second water tank 17' is used as the reserve water tank. Two basins 19 and 19' are housed under the water tanks 17 and 17', wherein the front basin 19 can be pulled out somewhat to be used as a catch basin for the tap 18 in operation. The compartments 20, 20', and 20" are used as cargo and storage space. Figure 6 shows the camping unit 1 with couch surface and hotplate in usage state in a schematic top view, wherein the functional elements of the usable space below the segment 3 of the couch surface are also shown as a partial sectional illustration for the sake of a better overview.

4. Brief description of the drawings:

- Figure 1 is a side view of an exemplary camping unit in the transport state.
- Figure 2 is a side view of the camping unit during the conversion from the transport state into the usage state.
- Figure 3 is a side view of the camping unit during the transfer from the transport state into the usage state with couch surface in the usage state.
- Figure 4 is a side view of the camping unit with hotplate and couch surface in the usage state.
- Figure 5a shows a schematic frontal view of the camping unit with couch surface and hotplate in the usage state as a sectional illustration.
- Figure 5b shows the view according to Figure 4 a with half folded-up windscreen.

Figure 5c shows the view according to Figure 4b with completely folded-up windscreen.

Figure 6 is a schematic top view of the camping unit with couch surface and hotplate in the usage state as a sectional illustration.

5. Industrial applicability:

The camping unit according to the invention is suitable for equipping vehicles with cabins, in particular panel vans, station wagons, and small vans having the functional core elements of a mobile home.

Patentkrav

1. Mobil campingenhed (1) med en i det væsentlige rektangulær grundflade (4),
 5 en liggeflade, der danner oversiden af campingenheden (1) og et derunder
 beliggende nytterum, hvor liggefladen er segmenteret, og kan omdannes fra en
 transporttilstand, i hvilken samtlige segmenter (3, 3', 3'') af liggefladen er
 beliggende fladt over hinanden, i det væsentlige kongruent i forhold til
 grundfladen (4) af campingenheden (1), til en benyttelsestilstand, i hvilken
 10 segmenterne (3, 3', 3'') af liggefladen er beliggende i et plan i højde med
 oversiden af campingenheden (1), og hvor liggefladen i benyttelsestilstanden er
 beliggende ved én ende i det væsentlige kongruent i forhold til grundfladen (4)
 af campingenheden, og ved den modsatte ende er støttet eller ophængt ved
 mindst et yderligere organ (11, 11'), og hvor et første segment (3) af liggefladen
 15 er monteret fast eller aftageligt som overside af campingenheden, **kendetegnet
 ved, at** de i en retning respektive, tilstødende segmenter (3', 3'') i hvert tilfælde
 er ledforbundet med mindst et hængsel (5, 5', 5'', 5''') eller drejeled, hvor de
 mellem segmenterne (3, 3', 3'') beliggende hængsler (5, 5', 5'', 5''') eller drejeled
 i hvert tilfælde udviser en vekslende omvendt orientering med en frihedsgrad på
 20 180°.

2. Mobil campingenhed (1) ifølge krav 1, **kendetegnet ved, at** den i det
 væsentlige er udformet som kvader, og at kantlængderne af dens grundflade
 25 (4) højst er 1200 × 800 mm.

3. Mobil campingenhed (1) ifølge krav 2, **kendetegnet ved, at** liggefladen i
 benyttelsestilstanden er beliggende i længderetningen på tværs af langsiden af
 30 campingenheden (1), og inddelt i tre segmenter.

4. Mobil campingenhed (1) ifølge et af krav 1 til 3, **kendetegnet ved, at** liggefladens segmenter (3, 3', 3'') er fast eller aftageligt polstret.

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5. Mobil campingenhed (1) ifølge et af krav 1 til 4, **kendetegnet ved, at** nytterummet er udformet med mindst et kogested (12, 12'), mindst en vandtank (17, 17') med aftapningssted (18), og mindst en kumme (19, 19') placeret under aftapningsstedet (18) af vandtanken (17, 17').

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6. Mobil campingenhed ifølge krav 5, **kendetegnet ved, at** nytterummet kan omdannes fra en transporttilstand, i hvilken campingenhedens (1) nytterum i det væsentlige er udformet som lukket kvader, til en benyttelsestilstand i hvilken kogestedet (12, 12') er beliggende uden for nytterummet.

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7. Mobil campingenhed ifølge krav 6, **kendetegnet ved, at** kogestedet (12, 12') under omdannelse fra transport- til benyttelsestilstanden er udformet som en skuffe (13).

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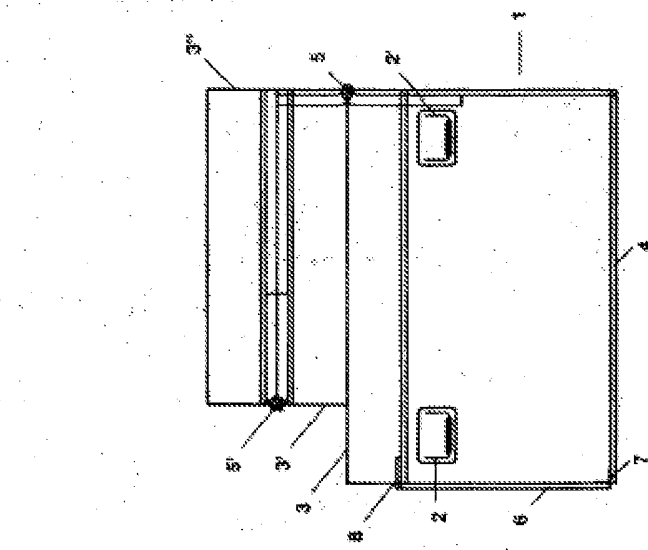
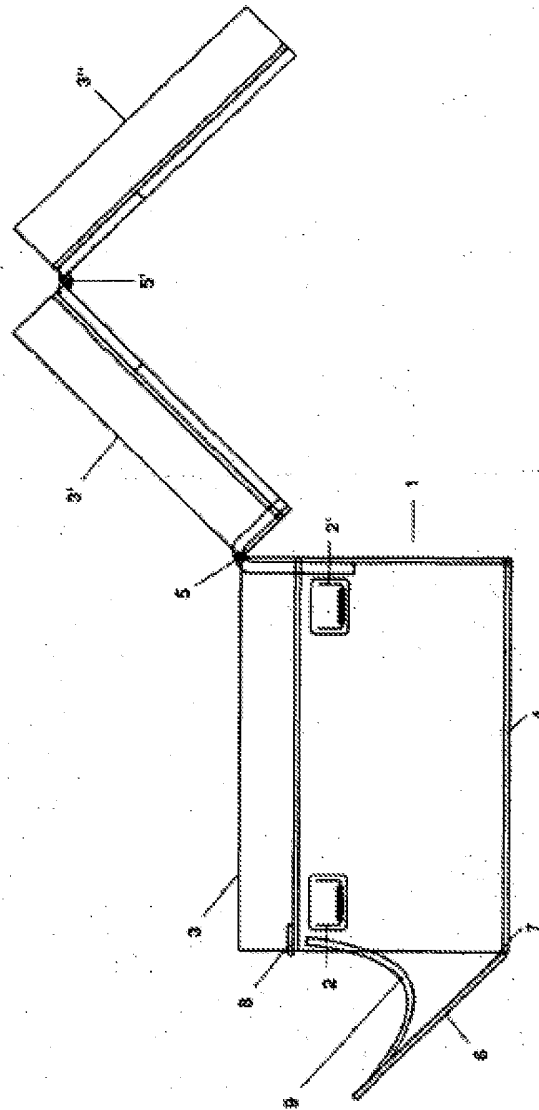


Fig. 1

Fig. 2



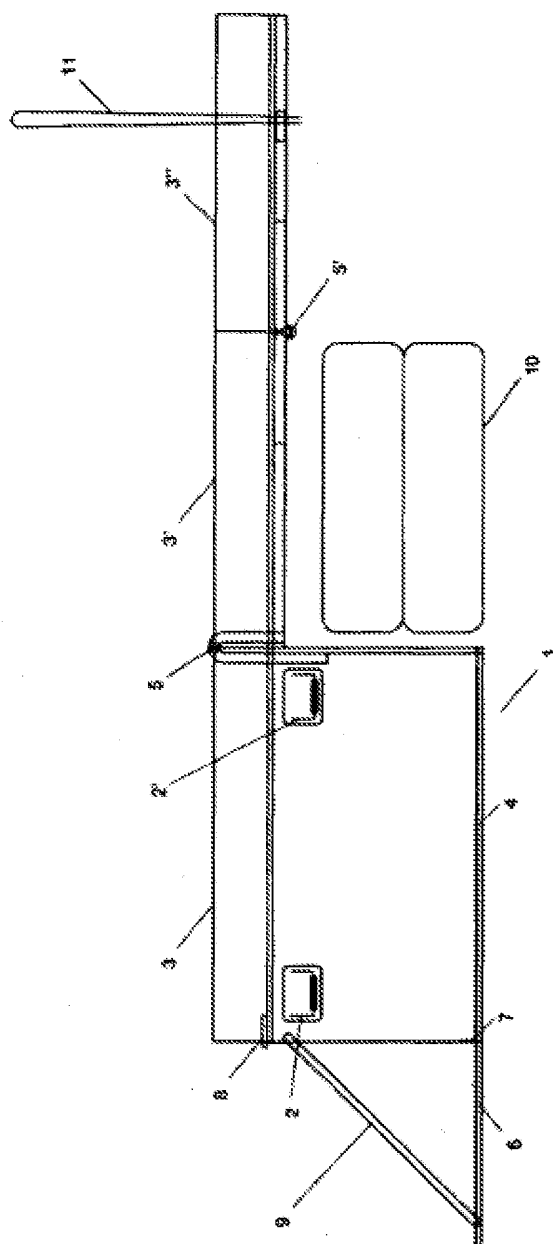


Fig. 3

Fig. 4

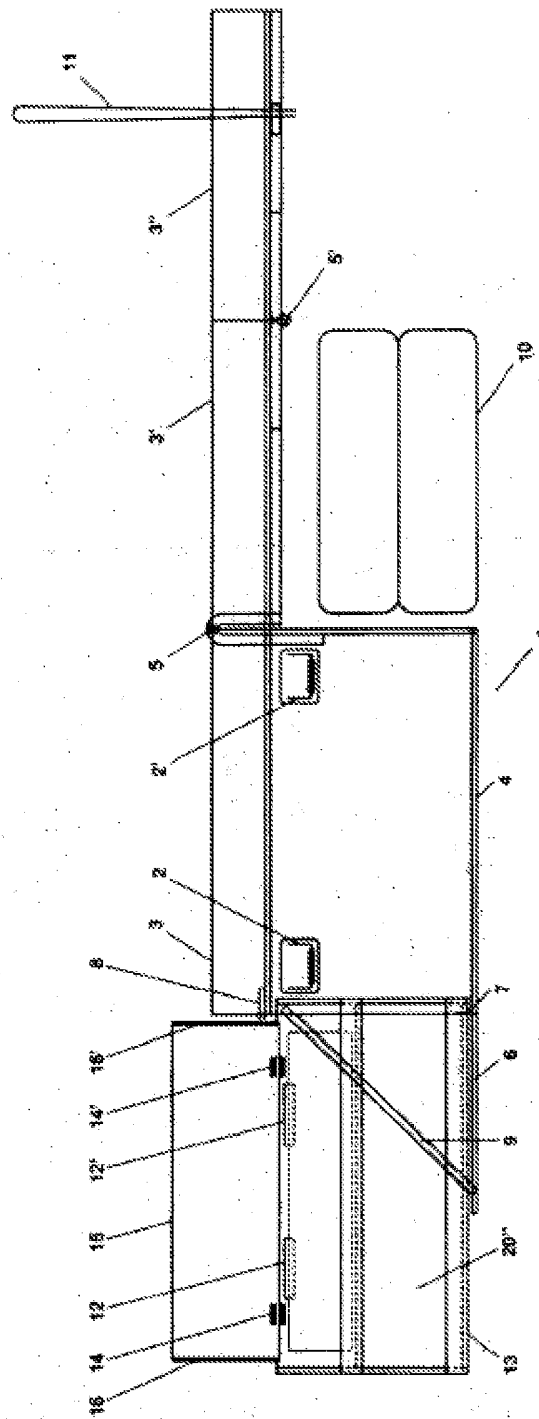


Fig. 5a

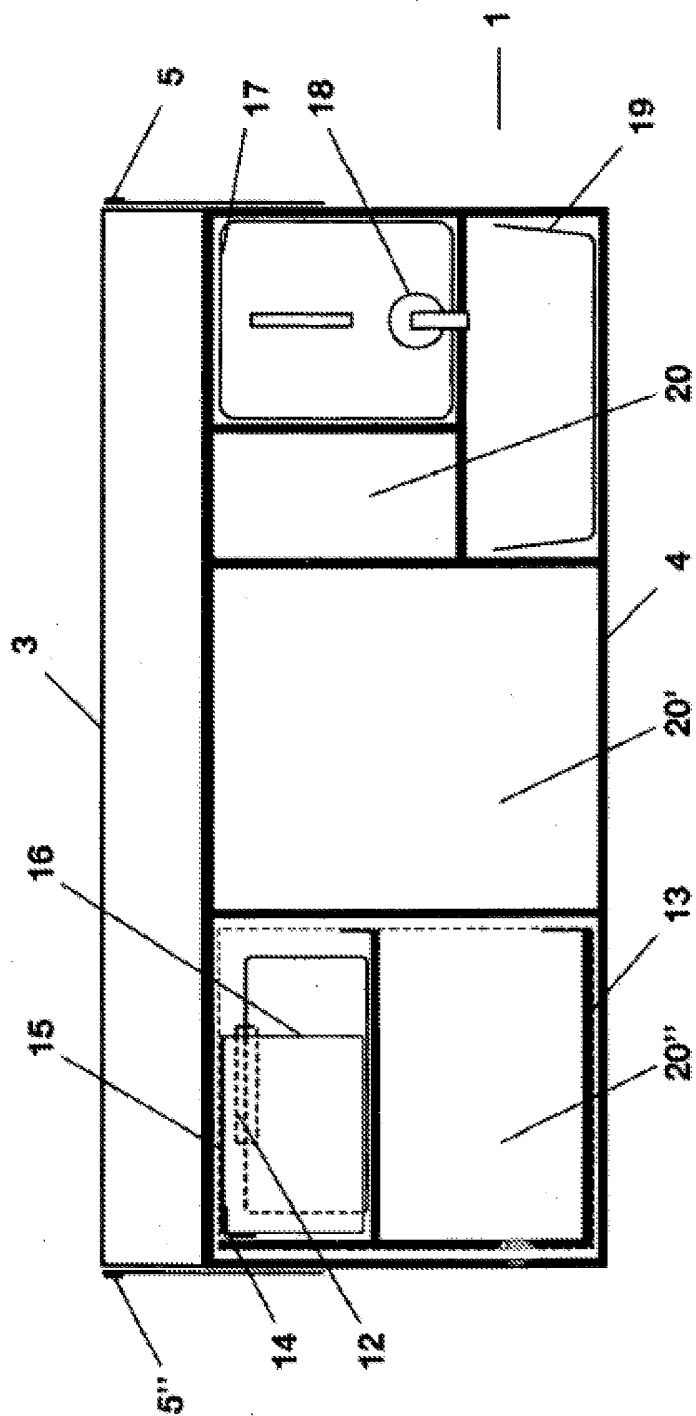


Fig. 5b

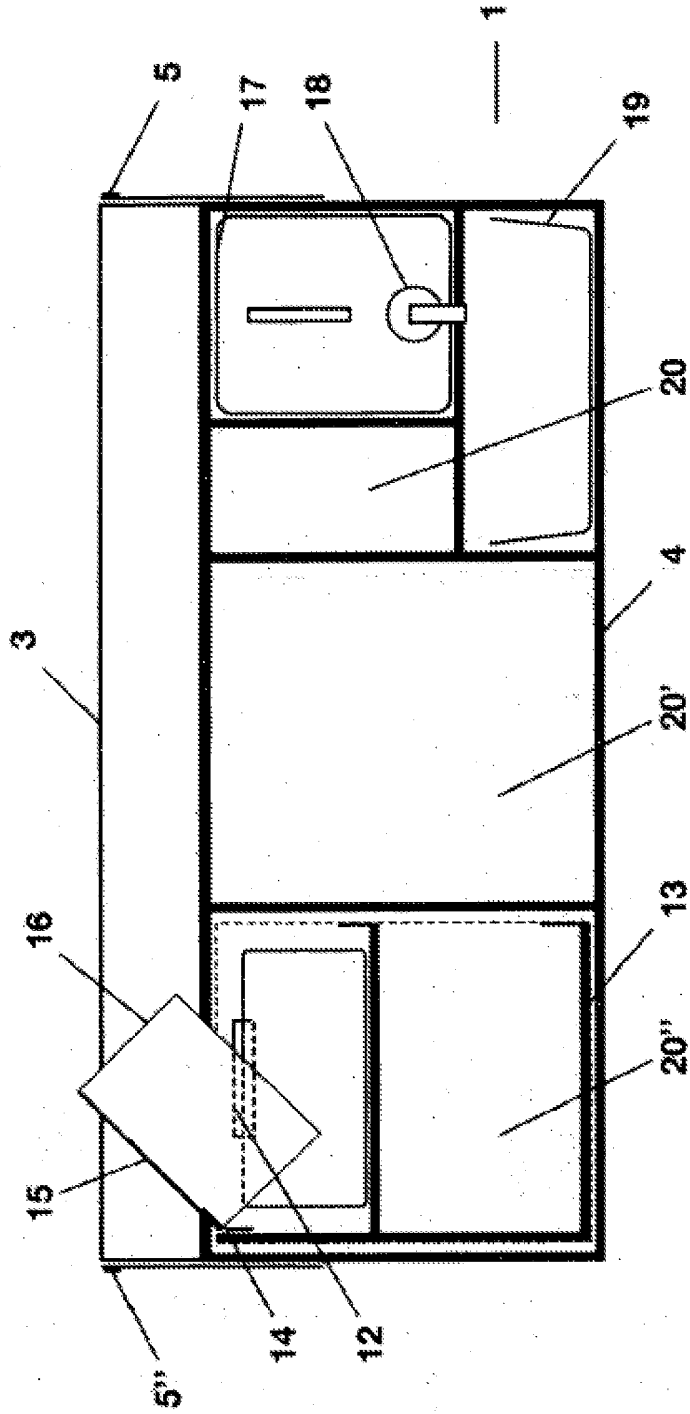


Fig. 5c

