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(54) **PAINT MIXING ROOM**
FARBMISCHKAMMER
LOCAL DE PRÉPARATION DE PEINTURES

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EP 2 702 216 B9

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Description

[0001] The invention relates to a portable paint mixing room comprising a base portion, four walls, a top portion, and at least one door located in one of the walls; at least one shelf, particularly for water-borne products, solvent-borne products with mixing heads and paddles and/or color tools; at least one workbench; a color station comprising e.g. a personal computer, a spectrophotometer, and a barcode reader; a connector for an electrical power supply; and a ventilation system. The at least one shelf, the at least one workbench and the color station are advantageously located inside the paint mixing room. The portable paint mixing room comprises at least two wheels at the base portion.

[0002] Paints, e.g. for painting a car, must be mixed and prepared before they are applied to the work piece to be painted. Due to evaporation of the paint during mixing and preparation, the air is polluted by vapors. In many countries, federal regulations are in force with respect to paint mixing rooms to protect persons working in a paint mixing room against hazards caused by paint vapors. This federal regulation e.g. relate to the ventilation and fire safety of a paint mixing room. Furthermore, paint mixing rooms must be explosion-proof.

[0003] In case a paint manufacturer wants to present new paint products and/or painting equipment at customers, the demonstration often takes place in a corner away from the existing mixing room due to space issues. In such an environment, it is impossible to present the paint products and/or the painting equipment in an optimal way, especially to demonstrate real value.

[0004] To overcome these issues, applicant has previously developed a demonstration van to present paint products and painting equipment to customers. In such a way, the paint product and the painting equipment can be presented in a professional environment, but it is temporarily and does not show what is possible in relation to a real paint mixing room. Furthermore, the available space in such a modified van is very limited and the whole van can swing in case a person is moving inside the van.

[0005] US 5,864,991 discloses a portable spraying room comprising a base portion, walls a top portion and at least one door located in one of the walls and connections for electrical power supply and ventilation.

[0006] EP 0 612 558 A1 discloses an in-store tinting system comprising a workbench extending between a colorant dispenser with a plurality of dispensing nozzles and a shaker for mixing coating compositions of a user-specified tint by introducing a dose of colorant to a base paint contained in a liddable container. Shelves for storing a stock of containers of base paints can be provided beneath the workbench.

[0007] It is thus an object of the present invention to provide an environment in which paint products and/or painting equipment can be presented to the customers in an optimal way, especially which allows to demonstrate real value.

[0008] The problem is solved by a paint mixing room comprising a base portion, at least two wheels at the base portion; four walls; a top portion; and a least one door located in one of the walls; at least one shelf, particularly for water-borne products, solvent-borne products with mixing heads and paddles and/or color tools; at least one workbench; a color station comprising e.g. a personal computer, a spectrophotometer and a barcode reader; a connector for an electrical power supply; and a ventilation system, wherein the paint mixing room is portable. The at least one shelf, the at least one workbench and the color station are advantageously located inside the paint mixing room. Preferably the paint mixing room is fully self-contained and fulfills all regulations with respect to ventilation, fire-safety and stability.

[0009] The paint mixing room is portable in the sense of this invention in case it can be moved by a transport vehicle or a trailer.

[0010] A fully self-contained paint mixing room in the sense of the invention is a paint mixing room containing all necessary equipment to produce a paint for painting a work piece, and the paint mixing room fulfills all regulations with respect to ventilation, fire-safety and stability in case a person is allowed to work inside the paint mixing room over a long period.

[0011] The paint mixing room according to the invention has the advantage that it can be equipped at the producer with all necessary items to present a showroom/mixing room to a customer and present real value. The fully equipped self-contained paint mixing room can be transported to a customer where it can be e.g. placed in a body shop, where the showroom/mixing room can be present to the customer in an optimal way.

[0012] According to a variant of the invention, the paint mixing room is built and sized in such a way that it can be transported via a trailer. In this room the paint mixing room can be easily transported to a customer.

[0013] According to a further variant of the invention, the paint mixing room is at most 6 m long, 4 m wide and 3 m high, preferably 3 m long, 2 m wide and 2.5 m high. A paint mixing room with these dimensions can be e.g. transported via trailer and placed into a body shop at the customer.

[0014] In a further variant, the paint mixing room further comprises at least two recesses in the base portion which are configured in such a way that the paint mixing room can be moved by a fork lift. In this way, the paint mixing room can be e.g. placed in a body shop via a fork lift.

[0015] The paint mixing room comprises at least two wheels, preferably four wheels, at the base portion. The paint mixing room with at least two wheels, preferably four wheels, can be moved at the customer e.g. into a body shop. Preferably, the wheels have a diameter less than 10 cm and consists of a hard material, e.g. plastic.

[0016] According to a preferred variant, the at least two wheels, preferably four wheels, are retractable. Hence, the wheels can be retracted once the paint mixing room has been moved to its final destination. This has the ad-

vantage that the paint mixing room is stable during its use. Alternatively, some of the wheels comprise a brake.

[0017] In a further variant, the paint mixing room comprises connecting means for connecting the paint mixing room to a crane, preferably located at the top portion. Using these connecting means the paint mixing room can be moved at the customer via a crane.

[0018] According to a preferred variant, one of the side-walls of the paint mixing room, preferably the sidewall comprising the door, comprises at least one window. Preferably, at least 50% of the surface area of the side-wall consists of window glass. Hence, more light from outside can shine into the paint mixing room and persons can look from outside into the paint mixing room e.g. during a presentation.

[0019] Advantageously, the paint mixing room is fully constructed and equipped prior to delivery. Thus, the paint mixing room can be used for a presentation directly after it has been transported to a customer.

[0020] According to a further preferred variant of the invention, the outside walls of the paint mixing room further comprise a shelf, a work table, at least one scale and/or a personal computer. Hence, outside the painting mixing rooms are working stations which can also be used during the presentation in case the used products do not have to be handled inside a paint mixing room due to safety regulations.

[0021] According to a further variant of the invention, at least one of the four walls is moveable relative to the other walls to extend the working space inside the paint mixing room.

[0022] In the following, an embodiment of the invention will be described with reference to the accompanying figures:

Figure 1 shows a perspective view of a paint mixing room according to an embodiment of the invention, and

Figure 2 shows an inside view of the paint mixing room according to Figure 1.

[0023] Figure 1 shows a painting mixing room 1 comprising a base portion 2, four walls 3, a top portion 4, and at least one door 5 located in one the walls 3; at least one shelf, particularly for water-borne products, solvent-borne products with mixing heads and paddles and/or color tools; at least one workbench 7; a color station 8 comprising e.g. a personal computer, a spectrophotometer, and a barcode reader; a connector for an electrical power supply; and a ventilation system; wherein the paint mixing room 1 is portable.

[0024] The paint mixing room 1 is fully constructed prior to delivery rather than prefabricated and then assembled at the customer. The fully self-contained paint mixing room 1 fulfills all regulations with respect to ventilation, fire-safety and stability.

[0025] After the paint mixing room 1 has been transported to a customer, where products will be presented,

the paint mixing room 1 only has to be connected to a power supply and is ready for use. The paint mixing room 1 can be used to present products in an optimal way and to demonstrate real value.

[0026] The paint mixing room 1 is built and sized in such a way that it can be transported via a trailer. The paint mixing room 1 according to figure 1 is 3 m long, 2 m wide and 2.8 m high. Thus, the paint mixing room 1 can be easily transported to a customer.

[0027] The base portion 2 of the paint mixing room 1 comprises two recesses 10 which are configured in such a way that the paint mixing room 1 can be moved by a fork lift.

[0028] The base portion 2 further comprises four wheels (not shown) which are retractable. The paint mixing room 1 can be moved into its final position at the customer via these wheels. After the paint mixing room 1 has reached its final destination, the wheels are retracted and the base portion 2 of the paint mixing room 1 rests on the ground floor.

[0029] The sidewall 3 comprising the door 5 as well as the door 5 itself comprise windows 9. More than 50% of the surface area of the sidewall 3 and the door 5 consists of window glass. Hence, one can look inside the paint mixing room during a presentation so that during a presentation of products only one person should be inside the paint mixing room 1 while the others watch the presentation from outside.

[0030] Two outside walls 4 of the paint mixing room 1, each comprising a shelf 6, a workbench 7, at least one scale which can be placed inside the shelf 6, and/or a personal computer which can be integrated into the side-wall 4 and the use via a touch pad display.

[0031] Preferably, at least one of the four walls 3 is moveable relative to the other walls 3 to extend the working space inside the paint mixing room 1. Hence, the paint mixing room 1 can be extended after it has been transported to a customer and moved to its final destination.

[0032] Figure 2 shows an inside view of the paint mixing room 1 according to figure 1. The inside of the paint mixing room 1 comprises several shelves 6, particularly for water-borne products, solvent-borne products with mixing heads and paddles and/or color tools; two workbenches 7; and a color station 8 comprising e.g. a personal computer, a spectrophotometer, and a barcode reader. The paint mixing room 1 is fully constructed and equipped prior to delivery. Hence, all necessary items for mixing a paint formulation are contained inside the paint mixing room 1. Once the paint mixing room 1 has been transported to a customer, the presentation of the products can start directly after the paint mixing room 1 has been connected to a power supply. Preferably, the inside of the paint mixing room 1 is air-conditioned and has been built in an air-extraction via the ventilation system 11.

1 paint mixing room

- 2 base portion
- 3 wall
- 4 top portion
- 5 door
- 6 shelf
- 7 workbench
- 8 color station
- 9 window
- 10 recess
- 11 ventilation

Claims

1. A portable paint mixing room (1) comprising:

a base portion (2), four walls (3), a top portion (4) and at least one door (5) located in one of the walls (3);
 a connector for an electrical power supply; and
 a ventilation system (11)
 at least one shelf (6);
 at least one workbench (7);
 a color station (8)
characterized in that the paint mixing room (1) comprises at least two wheels at the base portion (2).

2. Paint mixing room (1) according to claim 1,
characterized in that
 the paint mixing room (1) is built and sized in such a way that it can be transported via a trailer.

3. Paint mixing room (1) according to claim 2,
characterized in that
 the paint mixing room (1) is at most 6 m long, 4 m wide and 3 m high, preferably 3 m long, 2 m wide and 2.8 m high.

4. Paint mixing room (1) according to one of claims 1 to 3,
 further comprising at least two recesses (10) in the base portion (2) which are configured in such a way that the paint mixing room (1) can be moved by a fork lift.

5. Paint mixing room (1) according to one of claims 1 to 4, comprising four wheels at the base portion (2).

6. Paint mixing room (1) according to claim 1, wherein the at least two wheels are retractable.

7. Paint mixing room (1) according to one of claims 1 to 6, further comprising connecting means for connecting the paint mixing room 1 to a crane, preferably located at the top portion (4).

8. Paint mixing room (1) according to one of claims 1

to 7,

characterized in that

one of the sidewalls (3), preferably the sidewall (3) comprising the door (5), comprises at least one window (9).

9. Paint mixing room (1) according to claim 8, wherein at least 50% of the surface area of the sidewall (3) consist of window glass (9).

10. Paint mixing room (1) according to one of claims 1 to 9,

characterized in that

the paint mixing room (1) is fully constructed and equipped prior to delivery.

11. Paint mixing room (1) according to one of claims 1 to 10, wherein the outside walls (4) of the paint mixing room (1) further comprise:

at least one shelf (6),
 at least one workbench (7),
 at least one scale and/or
 at least one personal computer.

12. Paint mixing room (1) according to one of claims 1 to 11,

characterized in that

at least one of the four walls (3) is moveable relative to the other walls (3) to extend the working space inside the paint mixing room (1).

Patentansprüche

1. Ein portabler Lackmischraum (1) umfassend:

ein Unterteil (2), vier Wände (3), ein Oberteil (4) und wenigstens eine innerhalb einer der Wände (3) angeordnete Tür (5);
 einen Anschluss für eine Stromversorgung; und
 ein Belüftungssystem (11);
 wenigstens ein Regal (6);
 wenigstens einen Arbeitstisch (7);
 eine Farbstation (8),
dadurch gekennzeichnet, dass
 der Lackmischraum (1) wenigstens zwei Räder an dem Unterteil (2) umfasst.

2. Lackmischraum (1) gemäß Anspruch 1,
dadurch gekennzeichnet, dass
 der Lackmischraum (1) in einer Art und Weise ausgebildet und bemessen ist, dass er mittels eines Anhängers transportiert werden kann.

3. Lackmischraum (1) gemäß Anspruch 2,
dadurch gekennzeichnet, dass
 der Lackmischraum (1) höchstens 6 m lang, 4 m breit

und 3m hoch ist, vorzugsweise 3 m lang, 2 m breit und 2,8 m hoch.

4. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 3,
weiterhin umfassend wenigstens zwei Ausnehmungen (10) in dem Unterteil (2) welche in einer Art und Weise ausgebildet sind, dass der Lackmischraum (1) durch einen Gabelstapler bewegt werden kann. 5
5. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 4, umfassend vier Räder an dem Unterteil (2). 10
6. Lackmischraum (1) gemäß Anspruch 1, wobei die wenigstens zwei Räder einziehbar sind. 15
7. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 6, weiterhin umfassend Verbindungsmittel zum Verbinden des Lackmischraums (1) mit einem Kran, vorzugsweise an dem Oberteil (4) angeordnet. 20
8. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 7,
dadurch gekennzeichnet, dass 25
eine der Seitenwände (3), vorzugsweise die Seitenwand (3) umfassend die Tür (5), wenigstens ein Fenster (9) umfasst.
9. Lackmischraum (1) gemäß Anspruch 8, wobei wenigstens 50% der Oberfläche der Seitenwand (3) aus Fensterglas (9) besteht. 30
10. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 9,
dadurch gekennzeichnet, dass 35
der Lackmischraum (1) vor der Auslieferung vollständig ausgebildet und ausgestattet ist.
11. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 10, wobei die Außenwände (4) des Lackmischraums (1) weiterhin umfassen: 40

wenigstens ein Regal (6), 45
wenigstens einen Arbeitstisch (7),
wenigstens eine Waage und/oder
wenigstens einen Arbeitsplatzrechner.
12. Lackmischraum (1) gemäß einem der Ansprüche 1 bis 11,
dadurch gekennzeichnet, dass 50
wenigstens eine der vier Wände (3) relativ zu den anderen Wänden (3) bewegbar ist, um den Arbeitsbereich innerhalb des Lackmischraums (1) zu erweitern. 55

Revendications

1. Chambre de mélange de peinture portable (1) comprenant :

une partie de base (2), quatre murs (3), une partie supérieure (4) et au moins une porte (5) située dans l'un des murs (3) ;
un connecteur pour une alimentation électrique ; et
un système de ventilation (11) ;
au moins une étagère (6) ;
au moins un établi (7) ;
un poste de couleur (8),
caractérisée en ce que la chambre de mélange de peinture (1) comprend au moins deux roues au niveau de la partie de base (2).
2. Chambre de mélange de peinture (1) selon la revendication 1, **caractérisée en ce que** la chambre de mélange de peinture (1) est construite et dimensionnée de telle manière qu'elle peut être transportée au moyen d'une remorque.
3. Chambre de mélange de peinture (1) selon la revendication 2, **caractérisée en ce que** la chambre de mélange de peinture (1) fait au plus 6 m de long, 4 m de large et 3 m de haut, de préférence 3 m de long, 2 m de large et 2,8 m de haut.
4. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 3, comprenant en outre au moins deux évidements (10) dans la partie de base (2) qui sont configurés de telle manière que la chambre de mélange de peinture (1) peut être déplacée par un chariot élévateur à fourche.
5. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 4, comprenant quatre roues au niveau de la partie de base (2).
6. Chambre de mélange de peinture (1) selon la revendication 1, dans laquelle lesdites au moins deux roues sont rétractables.
7. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 6, comprenant en outre un moyen de connexion pour connecter la chambre de mélange de peinture (1) à une grue, situé de préférence au niveau de la partie supérieure (4).
8. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 7, **caractérisée en ce que** l'un des murs latéraux (3), de préférence le mur latéral (3) qui comprend la porte (5), comprend au moins une fenêtre (9).
9. Chambre de mélange de peinture (1) selon la reven-

dication 8, dans laquelle au moins 50 % de la surface du mur latéral (3) sont constitués de verre à vitre (9).

10. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 9, **caractérisée en ce que** la chambre de mélange de peinture (1) est entièrement construite et équipée avant d'être livrée. 5

11. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 10, dans laquelle les murs extérieurs (4) de la chambre de mélange de peinture (1) comprennent en outre : 10

au moins une étagère (6),
au moins un établi (7), 15
au moins une bascule et/ou
au moins un ordinateur personnel.

12. Chambre de mélange de peinture (1) selon l'une des revendications 1 à 11, **caractérisée en ce qu'**au moins l'un des quatre murs (3) est mobile par rapport aux autres murs (3) pour étendre l'espace de travail à l'intérieur de la chambre de mélange de peinture (1). 20

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Fig. 1

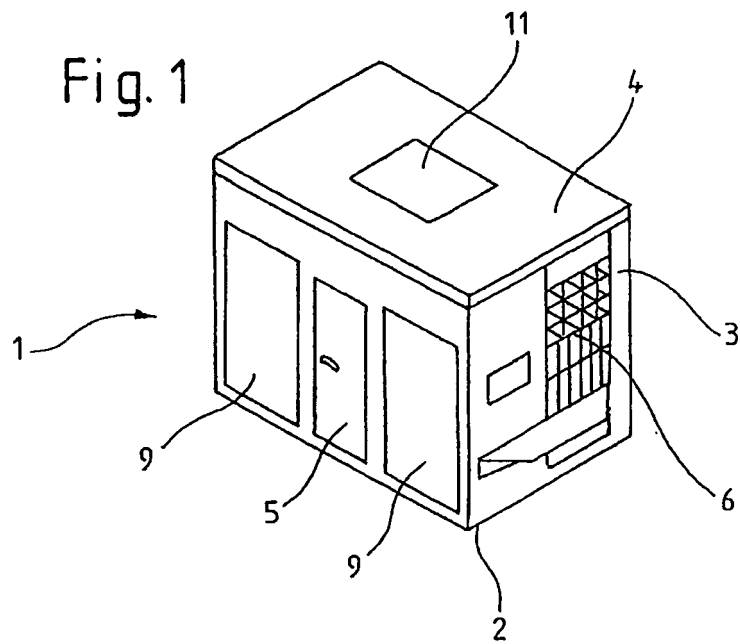
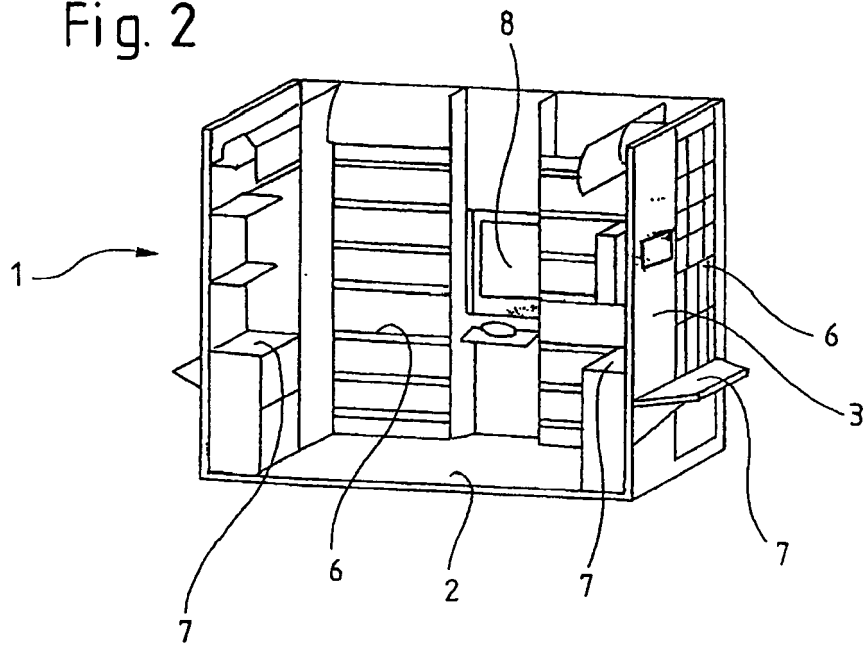


Fig. 2



REFERENCES CITED IN THE DESCRIPTION

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