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(54) **A scaffold**

(57) The application relates to a scaffold (1) comprising a front portion (2) and an opposite back portion (3), each having an upper end (5, 5') and a lower end (4, 4'), a support platform (6), which is connectable between said front and said back portions (2, 3), and said front portion (2) comprises two front rails (7) and at least one rung arranged between said front rails (7) allowing a user to step on said rung (8), said front portion (2) is further connected at its lower end (4) to a step platform (9) which allows a user during use to first step on said step platform (9) before stepping on said at least one rung (8), at least a part of said step platform (9) is arranged in front of said front portion (2), said front and said back portions (2, 3) are further connected at their upper ends by at least one support rail (10), wherein said support rail (10) is lower at said front portion (2) than at said back portion (3).

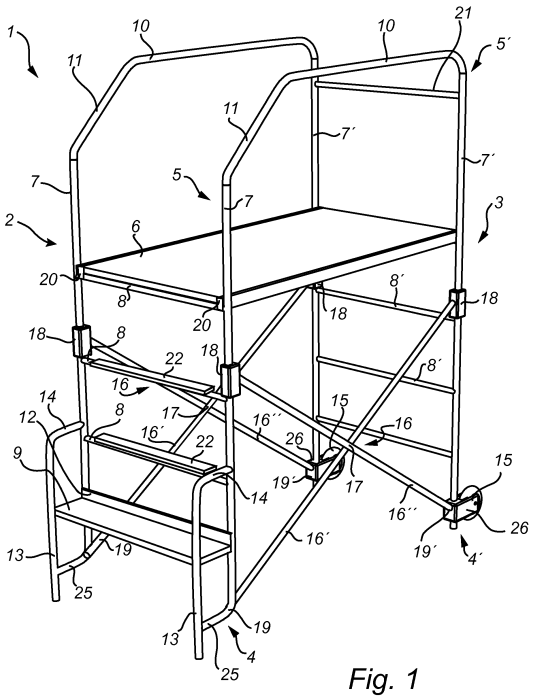

Fig. 1

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Description

Field of the Invention

[0001] The present invention relates to a scaffold comprising a front portion and an opposite back portion, each having an upper and a lower end, a support platform, which is connectable between said front portion and said back portion, and said front portion comprises two front rails and at least one rung arranged between said front rails allowing a user to step on said rung.

Technical Background

[0002] Painters and other craftsmen often use smaller scaffolds inside a building in order to be able to perform their task at a higher level. Scaffolds allow workers to work at elevated positions. Conventional scaffolds comprise a plurality of vertical posts which are connected by braces. One disadvantage of prior art scaffolds are that they do not provide convenient means for permitting a workman access to the support platform of the scaffold, they may for example involve a risk of tipping over the user.

[0003] US7210558 discloses a scaffold having a ladder assembly detachably connected to one end of a support frame of the scaffold, the ladder assembly being pivotally connected to one of the ends of the support frame. It shall solve the problem that scaffolds do not provide a convenient means for allowing a workman access to the support platform of the scaffold. However, this device takes up a relatively large space and it is not convenient for the user to easily access the step platform. Hence, there is still a need for a scaffold that does not take up a lot of space and which is easy to access without any risk for the user.

Summary of the Invention

[0004] The object of the present invention is to provide a scaffold that overcomes the above issues. It has been realised that by moving the weight of the user towards the centre of gravity of the scaffold, the scaffold will be more stable when a user is climbing it and it is prevented from falling over the user. According to the invention there is provided a scaffold comprising

a front portion and an opposite back portion, each having an upper and a lower end,

a support platform, which is connectable between said front portion and said back portion, and

said front portion comprises two front rails and at least one rung arranged between said front rails allowing a user to step on said rung,

said front portion is further connected at its lower end to a step platform which allows a user during use to first step on said step platform before stepping on said at least one rung, at least a part of said step platform being arranged in front of said front portion,

said front and said back portions are further connected at their upper ends by at least one support rail, wherein said support rail is lower at said front portion than at said back portion. When a user steps on the step platform he/she will be closer with his/her body to the front portion at the first step, i.e. the body is closer to the scaffold. This since the step platform allows the user to enter the scaffold with a vertical body posture. Normally, in the prior art (see Fig. 7), when a user is stepping on a first rung of a substantially vertically arranged front portion of a scaffold the user is leaning backwards and hangs onto the scaffold at the first step. By arranging the users weight closer to the scaffold the risk that the scaffold will tilt and fall over the user is reduced. Together with the support rail, which is lower at the front portion than at the back portion, the scaffold will be exposed to the weight of the user in a different way, than prior art scaffolds, since the weight of the user will be closer to the centre of gravity of the scaffold. The support rail allows the user to arrange his/hers arms closer to the centre of gravity of the scaffold, and the user can hence bend forward with his/her upper part of the body when climbing the scaffold (see Fig. 8), instead of leaning backwards. This will prevent the scaffold from falling over the user. The upper end of the front portion may be lower than the upper end of the back portion in order to accomplish that the support rail is lower at the front portion than at the back portion.

[0005] The step platform also allows the user to more easily step on the rung and to get closer to the support platform and the support rail before stepping on the rung. The step platform may be arranged bellow the rung. If there are more than rung, the step platform may be arranged bellow the lowest rung. Preferably, it is arranged 400-200mm under the first rung.

[0006] The support rail may, suitably, extend horizontally from said sub-portion towards the back rails of the back portion. Advantageously, the support rail is removably arranged to the upper end of the front portion and the upper end of the back portion. If the upper end of the front portion is lower than the upper end of the back portion the support rail may be asymmetrical, which prevents the support rail from being arranged in the wrong direction. That is, it is prevented that the support rail is arranged so that it is lower at the back portion.

[0007] The support platform, which is connectable between said front and said back portions may be loosely connectable, for example, by hooks which can be hung on the rung/rungs on the front portion and/or the back portion if the back portion also is provided with rungs or beams in a similar way as the front portion. For example, the back portion may also comprise two rails, i.e. two back rails and at least one rung, which is adapted to be stepped on or alternatively a beam arranged between said back rails. A beam may not explicitly be designed to be stepped on, however it may hold the support platform. If the front portion comprises more than one rung arranged between the front rails, the front portion will get a ladder shape allowing a user to climb the front portion

as a ladder. The front portion is advantageously substantially vertically arranged. The scaffold will then take up minimal space in the front area, in comparison to if the front portion were leaning away from the support platform. The back portion is advantageously vertically arranged. The scaffold will then take up minimal space in the back area in comparison to if the back portion were leaning away from the support platform. If both the front and the back portions are vertically arranged the scaffold will take up minimal space in comparison to if both the back portion and the front portion were leaning away from the support platform.

[0008] By having at least a part of the step platform arranged in front of the front portion it allows the user to more easily accesses the support platform. The step platform may in other words project perpendicularly from the front portion towards a direction away from said scaffold, i.e. towards the user when he/she is on his/her way of entering the scaffold, i.e. when he/she is facing the front portion and is standing directly in front of it.

[0009] Depending on how high up the support platform is arranged the user may only need to step on the step platform in order to arrange articles, such as paint buckets, tools etc., onto the support platform. The user may then use both his hands, instead of using one hand when stepping on the rung of the front portion.

[0010] According to an exemplary embodiment the front rails of the front portion and/or the back rails of the back portion and/or the support rail(s) are made of metal tubes. Advantageously, the scaffold may have two support rails. One support rail on each side of the support platform.

[0011] According to an exemplary embodiment at least a sub-portion of said support rail at said front portion is in an angle to said support rail, wherein said angle is other than 90 degree. By having at least a sub-portion of the support rail in an angle to the support rail and hence also to the front portion a front part of the support rail will be lower at the front portion and gradually get higher towards the back portion. When the user steps on the step platform and/or the rung the arms of the user will be positioned closer to the centre of gravity of the scaffold. Further, by having only a sub-portion of the support rail in an angle it allows only a part of the support rail i.e. in the area of the front portion, to be lower than the rest of the support rail. Advantageously, a relatively large part of the support rail is as high as possibly, since the aim of the support rail is to prevent the user from falling off the scaffold.

[0012] Another advantage by having a sub-portion of the support rail in the front portion in an angle is that if a user wants to push the scaffold through, for example, a door and he/she lifts it from the front portion side and tilts it around the lower end of the back portion it will be easier to get the scaffold through the door, since the tilted scaffold will have a reduced vertical extension compared to a scaffold having normal support rails. Preferably, the scaffold has wheels arranged at the back portion when being tilted this way on which the scaffold can be rolled on in order to prevent marks on the base the scaffold is standing on. Further, the angled sub-portion also makes it easier for the user when he/she is stepping down from the scaffold.

[0013] Alternatively to an angled sub-portion is that the sub-portion has a step shape. Another alternative is that the sub-portion has a large radius. Another alternative is that substantially the whole support rail is in an angle to the front portion, i.e. inclined upwards from the front portion to the back portion.

[0014] According to an exemplary embodiment, said angle relatively the support rail is between 10°-80°, more preferably 30°-60°. According to an exemplary embodiment the sub-portion is 20-50 cm of the support rail, more preferably 25-40cm.

[0015] According to an exemplary embodiment said step platform is fixedly arranged to said front portion. If the step platform is fixedly arranged to the front portion it may be an integrated part of the scaffold which may not fall off. Hence, it makes the scaffold robust. Further, the support platform, when removed, may be supported and stored on the step platform during transport or storage. Further, by having the step platform fixedly arranged to the front portion it may be made at least partly in one piece with the front portion, i.e. from the same piece of material as the front portion. For example, the base of the step platform may be formed by the two front rails of the front portion being bent in substantially 90 degrees away from the scaffold, if the front portion is a vertical front portion and it can be bent again in 90 degree so that is forms the lower end of the scaffold. However, other angles are also possible. A piece of material, for example a sheet metal or wood may then be arranged onto the two front rails so that a step platform is created.

[0016] According to an exemplary embodiment said step platform is wider than said at least one rung. If the step platform is wider than the rung it may be easier and more comfortable for the user to step on it. It also makes it easier for the user to step on the step platform without using any hands to hold himself, which may allow him to store things on the support platform before starting to climb the scaffold.

[0017] According to an exemplary embodiment said step platform has a rear edge adjacent to said front portion, which edge is protruding in a direction towards the upper part of said front portion. Preferably, the rear edge is just in front of the front portion or right under the rung or rungs. The rear edge prevents the user from slipping with his foot under the scaffold. The support platform may also be arranged on the rear edge, if for example the back portion is provided with a rung at the same level as the rear edge. The rear edge and the rung on the back portion may then provide the lowest position for the support platform.

[0018] According to an exemplary embodiment said step platform comprises at least one support leg which is arranged in front of and at a distance from said front

portion. Preferably, the support leg is arranged in front of the front portion. That is, it is arranged at a distance perpendicular to the front portion in a direction towards the user when he/she shall step onto said step platform and said rung of the front portion. By having a support leg the step platform is further supported. By having it arranged at a distance in front of the front portion it will support the step platform and the scaffold even further from falling over/tipping when the used climbs the scaffold. Preferably, it is so arranged so that when the user steps on the step platform the support leg is arranged substantially in front of the step platform, i.e. substantially behind the user or underneath the user, when he/she is standing on the step platform.

[0019] According to an exemplary embodiment at least one wheel is arranged to said lower portion of said back portion. If the user lifts the scaffold at the front portion the scaffold can then be moved easily with the aid of the wheel.

[0020] According to an exemplary embodiment said step platform comprises at least one handle allowing a user to tilt said scaffold around said lower portion of said back portion. A handle may make it easier for the user to move the scaffold. The handle may be a separate handle attached to either the front portion, for example to one of the front rails or to one of the rungs, or it may be integrated with the step platform.

[0021] According to an exemplary embodiment said front and said back portions are movable relative each other when said connecting support platform and said support rail are removed. If the front portions and the back portions are movable relatively each other the portions can be connected to each other to a package which may make it easier to store the scaffold or to transport it. Alternatively, the support rail is not a removable support rail it may be a foldable support rail in order to move the front portion relative to the back portion. Hence, according to an exemplary embodiment said front and said back portions are movable relative each other when said connecting support platform is removed.

[0022] According to an exemplary embodiment the front portion and the back portion may be further connected, on each side or on only one of the sides of the support platform, to each other by two side beams, wherein said two side beams form a pivotable cross beam by being pivotably connected in the middle. One end of the first beam is pivotably connected to the lower end of one of the front rails of the front portion and its opposite end is slidably and pivotably connected to the middle part i.e. between the lower end and the upper end of the back rail of the back portion which is arranged on the same side as the connected front rail of the front portion. One end of the second beam may be pivotably connected to the lower end of the same back rail of the back portion and its opposite end may be slidably and pivotably connected to the middle part, i.e. between the lower end and the upper end of the same front rail of the front portion. This allows the front portion and the back portion to be moved relative each other, but at the same time to be connected, when said connecting support platform and/or said support rail is/are removed. By having pivotably and moving bars the front portion and back portion may be connected all the time, also during transport and storing, and at the same time they will make the scaffold more stable.

[0023] According to an exemplary embodiment said support platform is arrangeable substantially vertically on said step platform and connectable to said front portion for storage and/or transport of the scaffold. By being able to arrange the support platform on the step platform and connect it to the front portion, the parts of the scaffold can be arranged together in an easy and space saving way.

[0024] According to an exemplary embodiment said support platform is attached to said front portion by straps. For example the support platform may comprise the straps and they may then be arranged around the front rails or the rung of the front portion. Using straps are an easy way to attach the support platform to the front portion so that a package is created which cannot be easily separated. Two straps may be arranged on either side of the support platform. One strap may have a hook and the other a loop, where the hook grabs into the loop, another alternative is to arrange hook- and loop-fasteners on the straps or adjustable clips. Another alternative is that only one strap is used to attach the support platform to the front portion, for example by a loop.

[0025] According to an exemplary embodiment said support rail is removably connected to said front and back portions. If the support rail is removably connected to the front portion and the back portion it may be easier to get a compact scaffold when it is not used.

[0026] For example, according to an exemplary embodiment said support rail is arrangeable substantially vertically on said step platform and connectable to said front portion and/or said support platform for storage and/or transport of the scaffold. It may be connectable by using straps in a similar way as described above.

[0027] According to an exemplary embodiment said scaffold comprises two support rails, wherein said first support rail is connectable to said second support rail for storage and/or transport of the scaffold. This can be done by having the ends of the support rails having different diameters. One support rail may have an inner diameter which is larger that the others outer diameter and they may then be mated together.

[0028] According to an exemplary embodiment, in addition to said at least one rung on the front portion, there may be provided two projecting holding elements, each arranged on a respective front rail protruding in the directions of the other rungs so that the support platform can be arranged thereon. The projecting holding elements may have a similar form as the rung. With the exception that the middle section of such a rung is omitted, i.e. the holding elements may correspond to the end sections of the rung. By not having a whole rung, but only

two projecting elements instead, the user can easily pass between the two projecting elements instead of climbing over it if the support platform is arranged on a rung below the highest possible position of the support platform. Preferably, the two projecting holding elements are arranged closer to the upper end of the front portion than said at least one rung.

[0029] According to an exemplary embodiment said back portion comprises the same features as the front portion. For example, the back portion may comprise two back rails and at least one rung arranged between said back rails allowing a user to step on said rung. The back portion may further be connected at its lower end to a second step platform which allows a user during use to first step on said step platform before stepping on said at least one rung on said back portion, wherein at least a part of said second step platform is arranged behind said back portion. This way a scaffold is created where the user can more easily can step onto the scaffold also from the back portion. Generally, all terms used in the claims are to be interpreted according to their ordinary meaning in the technical field, unless explicitly defined otherwise herein. All references to "a/an/the [element, device, component, means, step, etc]" are to be interpreted openly as referring to at least one instance of said element, device, component, means, step, etc., unless explicitly stated otherwise.

[0030] Other objectives, features and advantages of the present invention will appear from the following detailed disclosure, as well as from the drawings.

Brief Description of the Drawings

[0031] The above, as well as additional objects, features and advantages of the present invention, will be better understood through the following illustrative and non-limiting detailed description of exemplary embodiments of the present invention, with reference to the appended drawings, where the same reference numerals will be used for similar elements, wherein:

Fig. 1 shows a scaffold according to a first embodiment of the invention in perspective.

Fig. 2 shows a scaffold according to a second embodiment of the invention in perspective.

Fig. 3 shows a scaffold according to a third embodiment of the invention in perspective.

Fig. 4 shows the scaffold in Fig. 1 with the support platform and the support rails arranged in a storage position.

Fig. 5 shows the scaffold in Fig. 4 folded together in a storage position.

Fig. 6 shows the scaffold in Fig 1 with the support platform arranged at another position and with the uppermost arranged rung replaced by protruding holding elements.

Fig. 7 shows schematically a user climbing a prior art scaffold.

Fig. 8 shows schematically a user climbing the scaffold shown in Fig. 1.

[0032] All the figures are highly schematic, not necessarily to scale, and they show only parts which are necessary in order to elucidate the invention, other parts being omitted or merely suggested.

Detailed Description of Preferred Embodiments

[0033] Embodiments of the invention will be described in more detail in the following with reference to the accompanying drawings. The corresponding features of the second and third embodiment that can be found in the first embodiment are given the same numerals and will not be described again.

[0034] Fig. 1 shows a scaffold 1 which comprises a front portion 2 and a back portion 3. Both portions 2, 3 comprise a lower end 4, 4' and an upper end 5, 5'. The upper end 5' of the back portion 3 is higher than the upper end 5 of the front portion 2. The front portion 2 extends substantially vertically. The back portion 3 also extends substantially vertically. The front portion 2 and the back portion 3 may however be in an angle to each other, so that the scaffold gets an upside-down V-shape. The front portion 2 has two front rails 7 and three rungs 8 arranged there between. The front rails 7 are made of metal tubes. There may however be more or less rungs 8 arranged between the front rails 7. The rungs 8 are arranged at equal distances from each other. The rungs 8 allow a user to step thereon in order to climb the scaffold 1.

[0035] The back portion 3 has two back rails 7' and four rungs 8' arranged there between. However, less or more rungs may be arranged on the back portion 3. A support platform 6 is arranged to the uppermost rungs 8, 8' between the front and said back portions 2, 3.

[0036] The uppermost rung 8' of the back portion 3 is not shown since the support platform 6 is arranged thereon. The back portion 3 has at least the same amount of rungs and they are arranged at equal distances as the front portion 2 and they are arranged at the same level from the base on which the scaffold will be arranged, so that the support platform 6 will be horizontal to the base, for example the floor, the scaffold is standing on.

[0037] The support platform 6 allows a user to stand thereon in order to perform his work at a higher level. The support platform 6 is arranged to the rungs 8, 8', which are closest to the upper ends 5, 5' of the front portion 2 and the back portion 3. The support platform 6 is arranged to the rungs 8, 8' by hooks 20. Four hooks 20 are arranged to the support platform 6, two facing the front portion 2 and two facing in the opposite direction, i.e. towards the back portion 3 and each hook hooks around either the rung 8 on the front portion 2 or the rung 8' on the back portion 3. The support platform 6 may however be arranged differently to the rungs, i.e. with other devices than hooks. The support platform 6 is designed to be moved from the uppermost position to any

of the other rungs 8, 8'depending on the desired height of the support platform 6.

[0038] On each rung 8 on the front portion 2 a stepping board 22 is arranged. The stepping board is extending between the two front rails 7 of the front portion 2 leaving a section free for the hooks 20 on both sides closest to the front rails 7. The stepping board 22 provides a larger stepping area for the foot of the user. The stepping board 22 may be made of wood or metal. The stepping board 22 is however not necessary, some or all of the rungs may be arranged without a stepping board. A step platform 9 is arranged to the lower end 4 of the front portion 2, in such a way that at least a part of the step platform 9 is arranged in front of the front portion 2. That is, the step platform 9 may project in a direction which will be parallel with the base, for example the floor, the scaffold will stand on. Here the step platform 9 is perpendicular to the front portion 2, since the front portion is arranged vertically. The step platform 9 is projecting in a direction which is towards the user when he/she is standing with his/her nose towards the front portion 2, i.e. in front of the middle of the front portion 2. The step platform 9 allows a user during use to first step on the step platform 9 before stepping on one of the rungs 8 of the front portion 2. The step platform 9 is arranged underneath the first rung 8, i.e. the first rung from the lower end 4 of the front portion 9.

[0039] The step platform 9 is here exemplarily designed by the lower ends 25 of the front rails 7 being bent 90 degrees away from the scaffold 1. The angle may however be in any suitable degree. To each bent lower ends 25 of the front rails a support leg 13 is connected in such a way that the support leg 13 will be in contact with the base, i.e. the underlying surface on which the scaffold will be placed on, for example a floor and connected to the front panel 2 at a higher level than the bent lower ends 25 of the front rails 7. The support leg 13 is extending from the base and connected to the front portion 2 at a higher level than the bent lower end 25 of the front rails by a bent portion 14. The step platform 9 is connected to the two front rails 7 and further to the support legs 13 at a distance below the bent portion 14 of the support leg 13. The bent portion 14 then becomes a handle 14. The distance between the handle 14 and the step platform 9 is preferably so large that a hand can comfortably grip the handle 14, i.e. the bent portion 14. Alternatively, the step platform is arranged on top of the bent portion 14 and the support leg 13 can be used as a handle. Another alternative is that a handle/handles are arranged to the front portion. For example a handle can be arranged to each front rail 7 of the front portion. The handles 14 are to be used when moving the scaffold 1. However, handles do not have to be provided, the front portion 2 and the rungs 8 may be used as handles when moving the scaffold. Alternatively, the bent lower ends 25 of the front rails 7 may also support on the floor. The support legs 13 may then only be attached to the front rails 7 at one position. Four support legs will then be arranged adjacent, or under the step platform 9.

[0040] The step platform 9 has a rear edge 12 adjacent to said front portion 2. The rear edge 12 can be arranged in front of the front portion, underneath the rungs 8 or behind the front portion, i.e. underneath the support platform 6 if part of the step platform 9 is extending under the support platform 6. The edge 12 is protruding in a direction towards the upper end 5 of said front portion 2. The purpose of the rear edge 12 is that it may prevent the foot of the user to slip through the rungs and under the support platform 6, i.e. under the scaffold 1. When the support platform 6 is arranged at its lowest position it can be arranged on the rear edge 12 and at the lowest positioned rung 8'on the back portion 3.

[0041] The front and the back portions 2, 3 are connected at their upper ends via the front rails 7 and the back rails 7' by two support rails 10. The support rails 10 are for preventing the user of the scaffold from falling off the scaffold. Each support rail 10 is reconnectably arranged at one end to one of the front rails 7 of the front portion 2 and the opposite end is arranged to the opposite back rail 7'of the back portion 3. They are reconnectably arranged by one end of either the support rail 10 or the front rail 7 or back rail 7' having a larger inner diameter then the other rail has as outer diameter. The rail with the larger inner diameter is arranged onto the rail with the smaller outer diameter.

[0042] The support rail 10 is lower at the front portion 2 than at the back portion 3. The support rail 10 has an sub-portion 11, which is in an angle, other than 90 degree to the rest of the support rail. That is, it is in an angle, other than 90 degree to the front portion 2.

[0043] At the upper portion 5'of the back portion 3 a cross beam 21 is arranged which will work as a support beam, which may prevent a user from falling of the platform. The support rails 10 are preferably at a height which also may prevent a user from falling off the support platform.

[0044] The front portion 2 and the back portion 3 are further connected on each side of the scaffold 1 by two beams 16', 16", i.e. totally four beams. The two beams 16', 16" on one side of the scaffold are pivotably connected as a cross-beam 16 in the middle of each beam at a pivot point 17. The first beam 16' is pivotably attached to the lower end 4 of the front portion 2 at a pivot point 19 and the opposite end is slidably and pivotably attached to the middle portion of the back portion 3. The second beam 16" is pivotably attached to the lower end 4' of the back portion 3 at a pivot point 19' and the opposite end is pivotably attached to the middle portion of the front portion 2. The ends which are arranged at the middle portion are arranged to the front rails and the back rails via slidable connectors 18. The slidable connectors 18 may have a profile which surrounds at least partly the back rail 7'or the front rail 7 as a claw. On the other side of the scaffold 1 the front portion 2 and the back portion 3 are connected in similar way.

[0045] These cross-beams 16 further support the scaf-

fold. By having them slidably and pivotably arranged to the front and the back portions 2, 3 the two portions 2, 3 may be movable, but still connected, relative to each other when the support platform 6 and the support rails 10 are removed.

[0046] At the lower end 4' of the back portion 3 on each back rail 7' is a wheel 15 arranged. The wheels 15 are arranged via a wheel connector 26 which is so arranged that the wheels are slightly above the ground or abuts the ground. When the scaffold is being used the scaffold is standing on the lower end 4'of the back portion 3. If the user tilts the scaffold 1 around the lower end of the back portion 3, by lifting the front portion 2 by using, for example, the handles 14 the scaffold will be resting on the wheels 15 and can be easily manoeuvred and moved.

[0047] Fig. 2 shows a second embodiment of the scaffold 1, which is similar to the embodiment described in Fig. 1, except that the sub-portion 11 of the support rail 10 is different. Instead of the sub-portion 11 being in an angle, which is other than 90 degrees, to the support rail 10, i.e. and also to the front portion 2 the sub-portion 11 has a step shape. The sub-portion 11 is bent in 90 degrees from the front portion, i.e. towards the back portion 3 of the scaffold 1, so that it extends in parallel to the support platform 6 and it is then bent 90 degree in a direction away from the support platform before it is bent again 90 degree so that it runs in parallel again with the support platform 6 towards the back portion 3.

[0048] Fig. 3 shows a third embodiment of the scaffold 1, which is similar to the embodiment described in Fig. 2, except that support rails 10 extend from the back portion 3 to the front portion 2 parallel with the support platform 6. In addition to the horizontally extending part between the front and the back portions 2, 3, the support rails also comprise sub-portions 11. The sub-portion 11 is having a similar design as in Fig. 2, but with the difference that it is arranged slightly inside the support rails 10.

[0049] Another option is to have horizontal parts of the support rails 10 extending all the way between the front and the back portions (as shown in Fig. 3) in combination with an angled portion (as shown in Fig. 1) wherein the angled sub-portion would extend slightly inside the horizontal parts of the support rails. The advantage of this embodiment and the one shown in Fig. 3 is that a person has a lower gripping area at the sub-portions enabling his/her centre of gravity to be located closely to the scaffold while also further reducing the risk of falling of the support platform due to the longer extension of the horizontal part.

[0050] Fig. 4 shows the scaffold 1 described in regard to Fig. 1, with the support platform 6 removed from the front portion 2 and the back portion 3. The support platform 6 is arranged vertically on the step platform 9 and connected to the front rails 7 of the front portion 2 by straps 23 on both sides of it. The straps 23 are arranged on the support platform 6 and the straps 23 can be connected around one of the front rails 7. The support rails 10 are also arranged vertically in front of the support platform 6 and connected by straps 24 to the front rails 7 of the front portion 2, alternatively to the support platform 6. The two support rails 10 are connectable to each other by one of the support rails having an end which has a diameter which is smaller than the other, so that they can be mated.

[0051] Fig. 5 shows the scaffold 1 of Fig. 1 with the support platform 6 and the support rails 10 arranged as in Fig. 4. The front portion 2 and the back portion 3 has been moved relative to each other. That is, the scaffold 1 has been folded together. This is done by removing the support platform 6 and the support rails 10, which are holding the front portion 2 and the back portion 3 in a "locked" position so that the slidable connectors 18 can slide on the front rails 7 and the back rails 7'of the front portion 2 and the back portion 3 when the front portion 2 and the back portion 3 are moved closer to each other. The front portion 2 and the back portion 3 may then be connected together by, for example, a strap or in any other suitable way or separated from each other.

[0052] Fig. 6 shows the scaffold 1 of Fig. 1, but with the support platform 6 not arranged at its uppermost position, instead it is arranged one position below. Instead of a rung arranged at the uppermost position on the front portion 2 two projecting holding elements 27, each arranged on a respective front rail 7 protruding in the directions of the other rungs 8 so that the support platform 6 can be arranged thereon if it shall be positioned at its uppermost position. By not having a whole rung, but only two projecting holding elements 27, the user can easily pass between the two projecting holding elements 27 if the support platform 6 is arranged on a rung below the highest possible position of the support platform. The user does not have to step over a rung if a rung is not arranged at the uppermost portion. Hence, the projecting holding elements 27 makes it easier for the user to step on the support platform 6, when the support platform 6 is not arranged at its highest possible position.

[0053] Fig. 7 shows a prior art scaffold 100 with a user 130. The user 130 is stepping on the first rung 108 of a substantially vertically arranged front portion 102 of the scaffold 100 and he is leaning backwards and hangs onto the scaffold 100 at the first rung 108.

[0054] Fig. 8 shows the scaffold 1 of Fig. 1 with a user 30. The user 30 is stepping on the step platform 9. His/her hands are arranged on the angled sub-portion 11 of the support rail 10. The hands are closer to the back portion 3. The user 30 is bending slightly forwards so his centre of gravity is closer to the scaffold 1 than by the user shown in Fig. 7, i.e. it is closer to the front portion. Preferably, the user's centre of gravity is between the scaffold and the support legs of the step platform 9. Thanks to that the foot of the user is arranged on the step platform 9 it is arranged further away from the front portion 2, in Fig. 8, in comparison to the foot of the user in Fig. 7, where the foot is arranged on the first rung. This in combination with the hands closer to the back portion 3 the user gets another posture, i.e. the user may bend towards the cen-

tre of the scaffold 1, which will prevent the scaffold 1 from falling over when a user is climbing the scaffold 1 from the front portion 2.

[0055] The invention has mainly been described above with reference to a few embodiments. However, as is readily appreciated by a person skilled in the art, other embodiments than the ones disclosed above are equally possible within the scope of the invention, as defined by the appended patent claims.

Claims

1. A scaffold (1) comprising
a front portion (2) and an opposite back portion (3), each having an upper end (5, 5') and a lower end (4, 4'),
a support platform (6), which is connectable between said front and said back portions (2, 3), and
said front portion (2) comprises two front rails (7) and at least one rung (8) arranged between said front rails (7) allowing a user to step on said rung (8),
said front portion (2) is further connected at its lower end (4) to a step platform (9) which allows a user during use to first step on said step platform (9) before stepping on said at least one rung (8), at least a part of said step platform (9) being arranged in front of said front portion (2),
said front and said back portions (2, 3) are further connected at their upper ends by at least one support rail (10), wherein said support rail (10) is lower at said front portion (2) than at said back portion (3).

2. A scaffold (1) according to claim 1, wherein at least a sub-portion (11) of said support rail (10) at said front portion (2) is in an angle to said support rail (10), wherein said angle is other than 90 degree.

3. A scaffold (1) according to claim 2, wherein said angle relatively the support rail is between 10°-80°, more preferably 30°-60°.

4. A scaffold (1) according to any one of the preceding claims, wherein said step platform (9) is fixedly arranged to said front portion (2).

5. A scaffold (1) according to any one of the preceding claims, wherein said step platform (9) is wider than said at least one rung (8).

6. A scaffold (1) according to any one of the preceding claims, wherein said step platform (9) has a rear edge (12) adjacent to said front portion (2), which edge (12) is protruding in a direction towards the upper end (5) of said front portion (2).

7. A scaffold (1) according to any one of the preceding claims, wherein said step platform (9) comprises at least on support leg (13) which is arranged in front of and at a distance from said front portion (2).

8. A scaffold (1) according to any one of the preceding claims, wherein at least one wheel (15) is arranged to said lower end (4') of said back portion (3).

9. A scaffold (1) according to any one of the preceding claims, wherein said front portion (2) and said back portion (3) are movable relative each other when said connecting support platform (6) and said support rail (10) are removed.

10. A scaffold (1) according to any one of the preceding claims, wherein said support platform (6) is arrangeable substantially vertically on said step platform (9) and connectable to said front portion (2) for storage and/or transport of the scaffold

11. A scaffold (1) according to claim 10, wherein said support platform (6) is attached to said front portion (2) by straps.

12. A scaffold (1) according to any one of the preceding claims, wherein said support rail (10) is removably connected to said front and back portions (2, 3).

13. A scaffold (1) according to claim 12, wherein said support rail (10) is arrangeable substantially vertically on said step platform (9) and connectable to said front portion (2) and/or said support platform (6) for storage and/or transport of the scaffold.

14. A scaffold (1) according to any one of the preceding claims, wherein said scaffold (1) comprises two support rails (10, 10'), wherein said first support rail (10) is connectable to said second support rail (10, 10') for storage and/or transport of the scaffold.

15. A scaffold (1) according to any one of the preceding claims, wherein said front portion (2), in addition to said at least one rung (8) on said front portion (2), is provided with two projecting holding elements (27), each arranged on a respective front rail (7) protruding in the directions of said at least one rung (8) so that said support platform (6) can be arranged thereon.

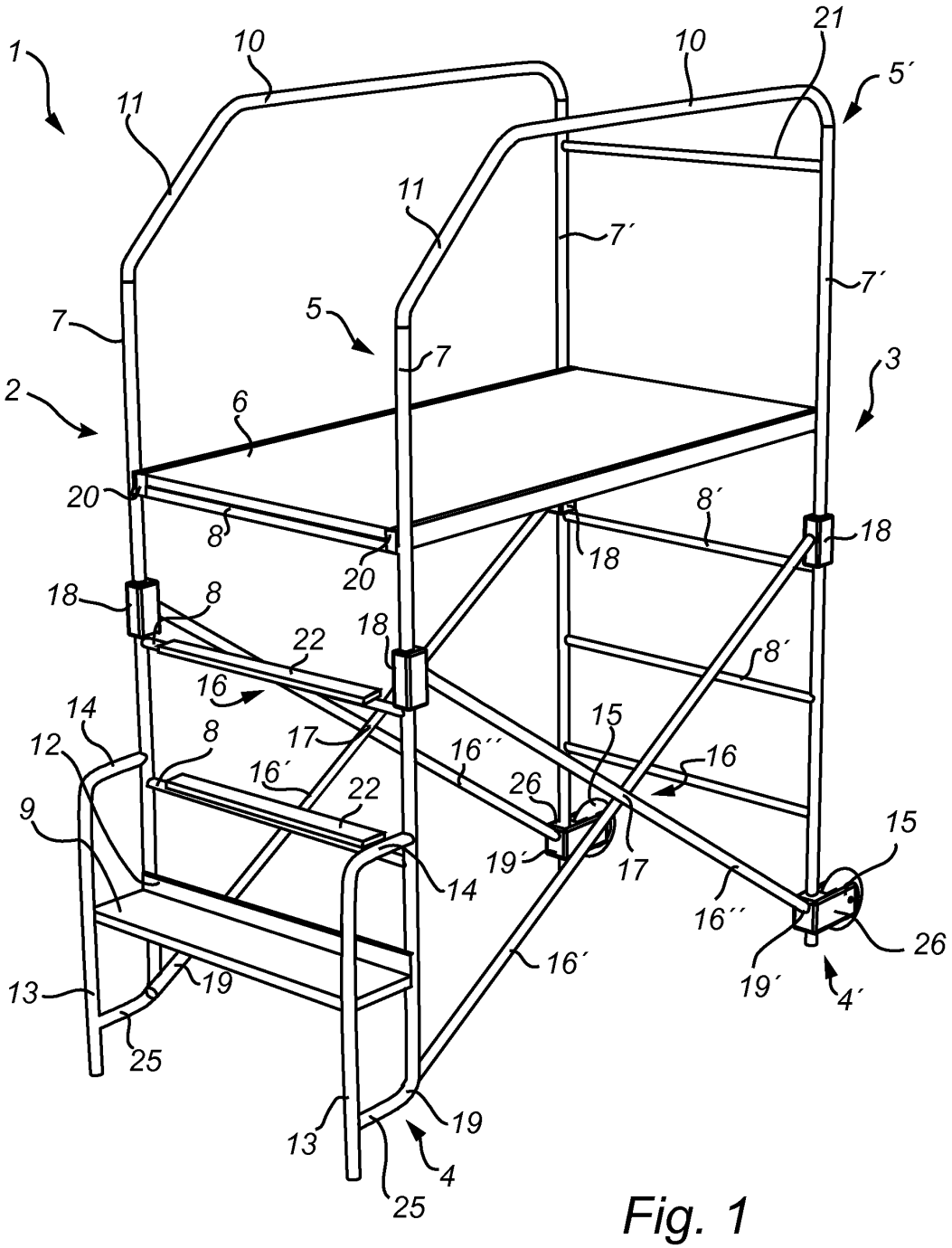
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Fig. 1

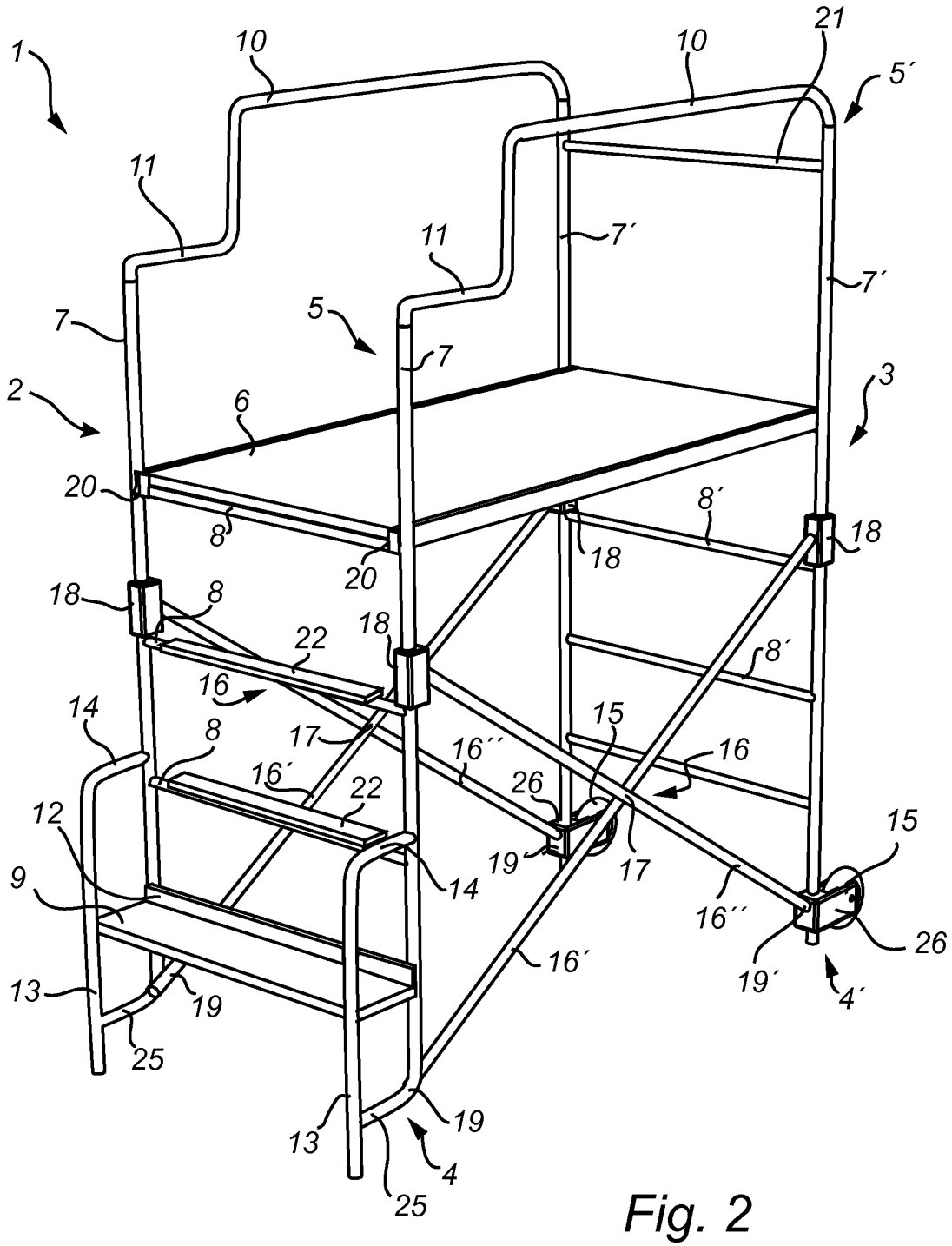
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Fig. 2

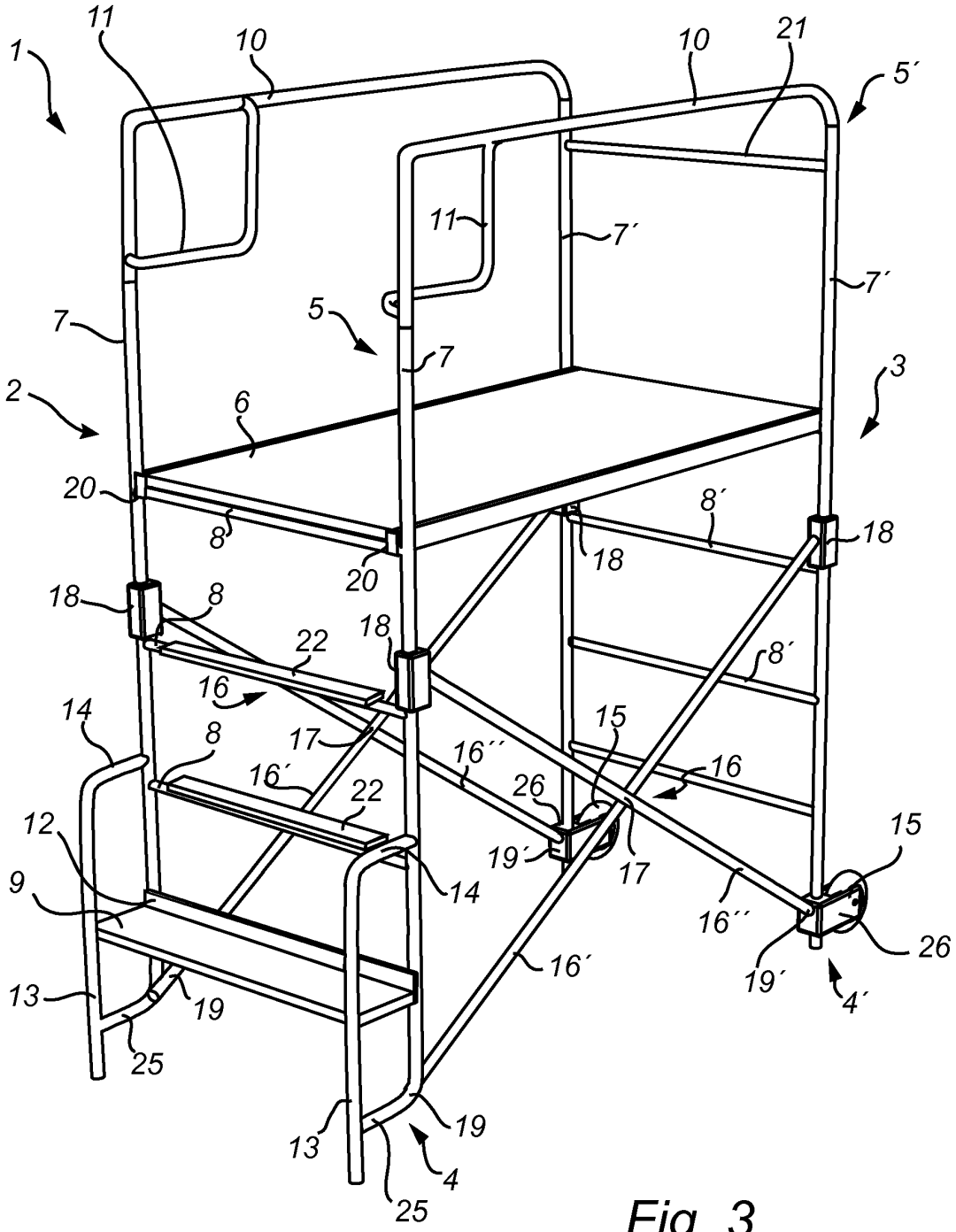
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Fig. 3

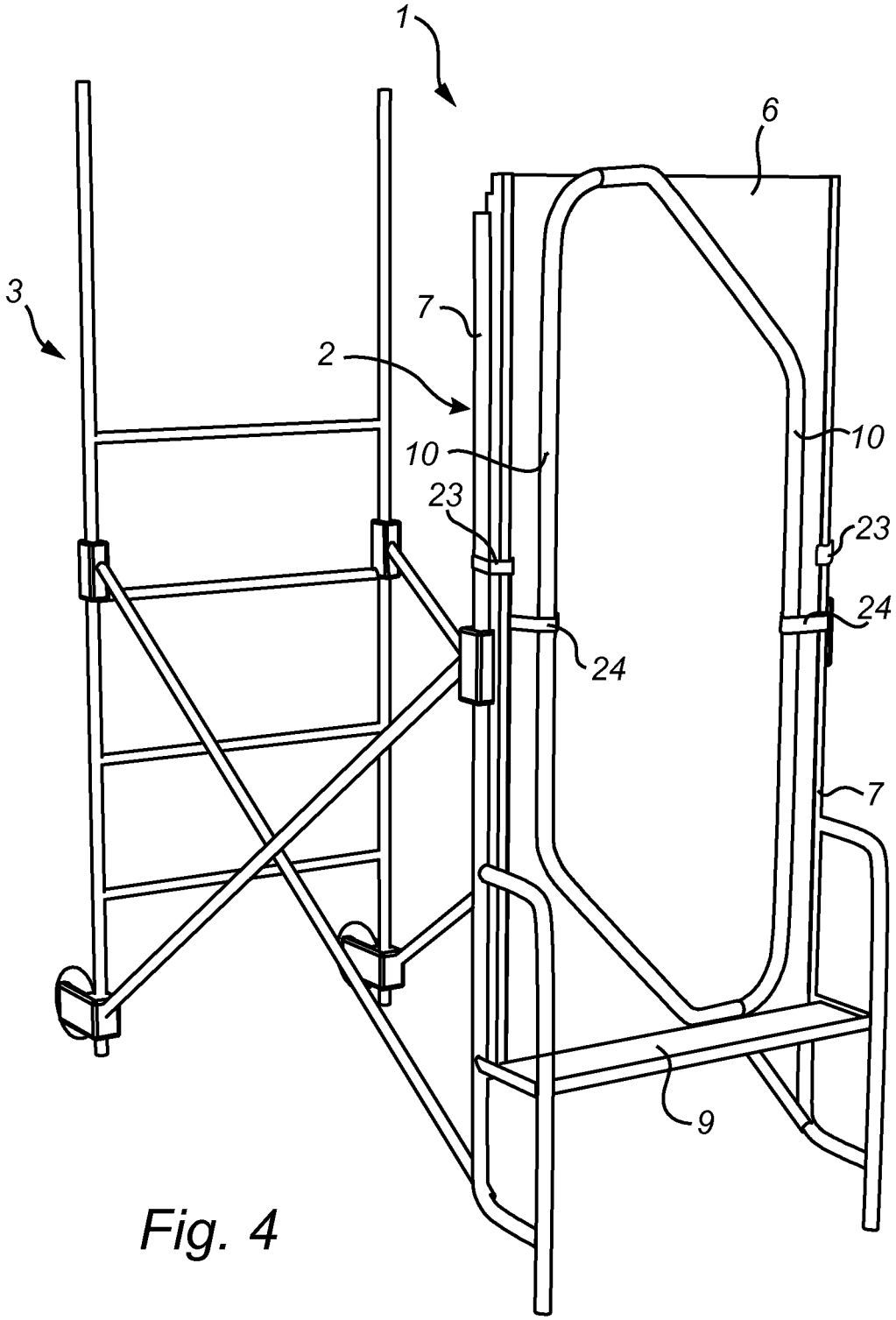

Fig. 4

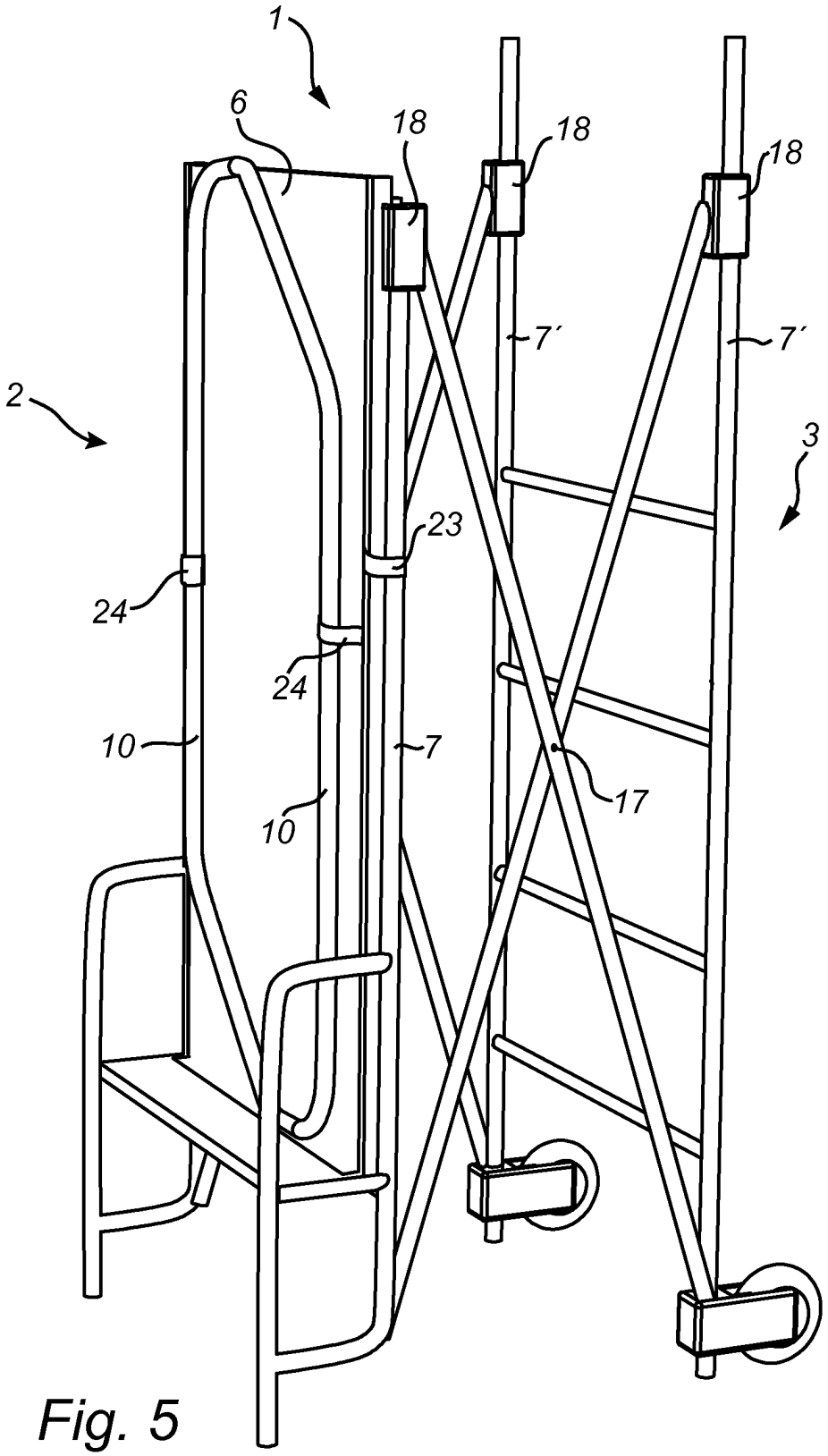

Fig. 5

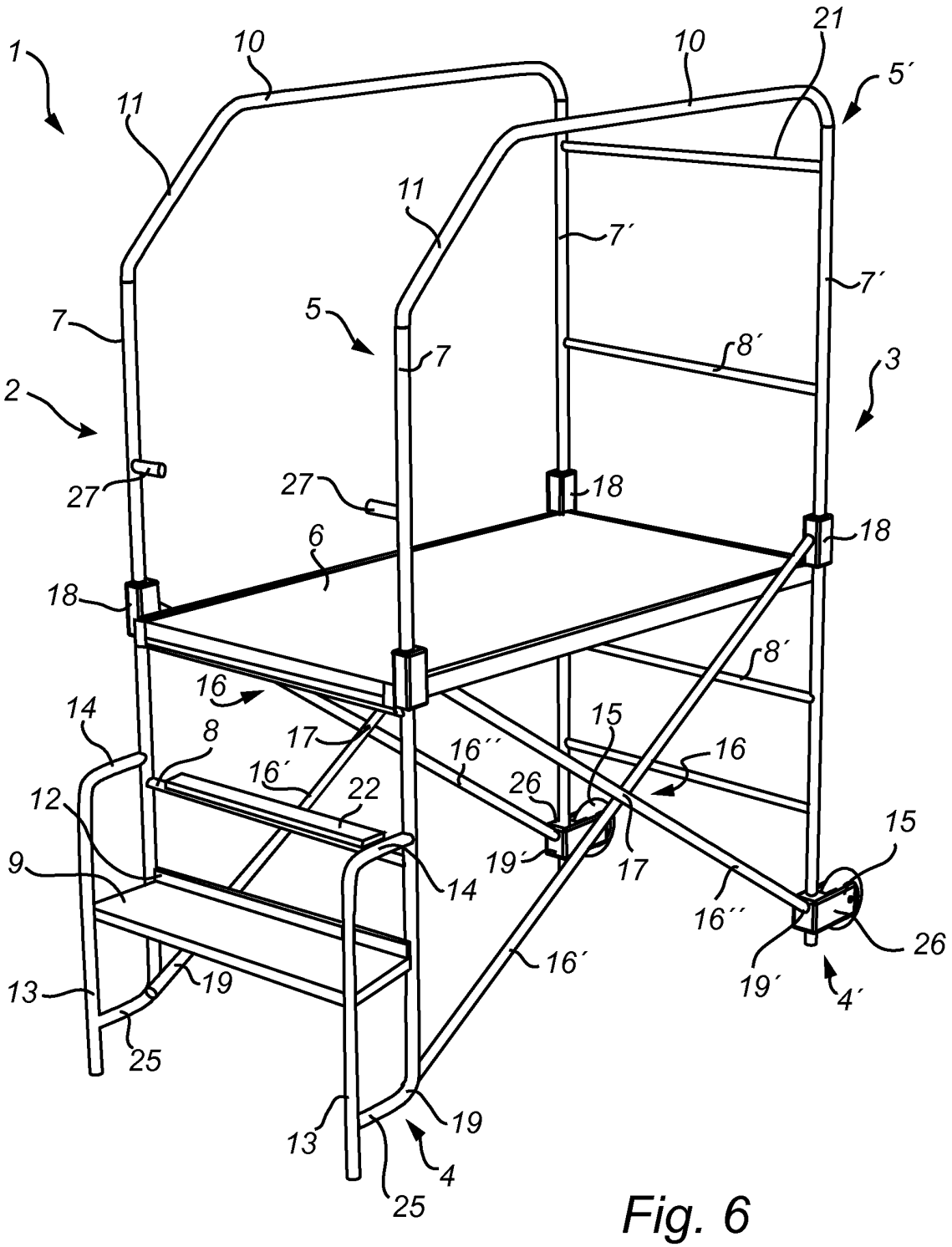
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Fig. 6

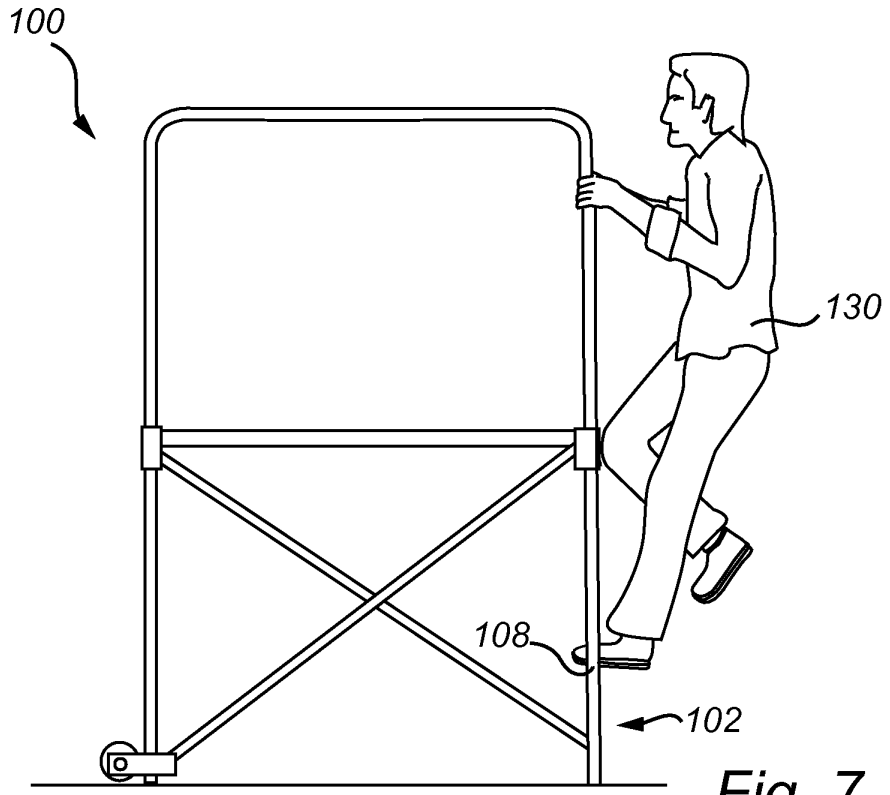

Fig. 7

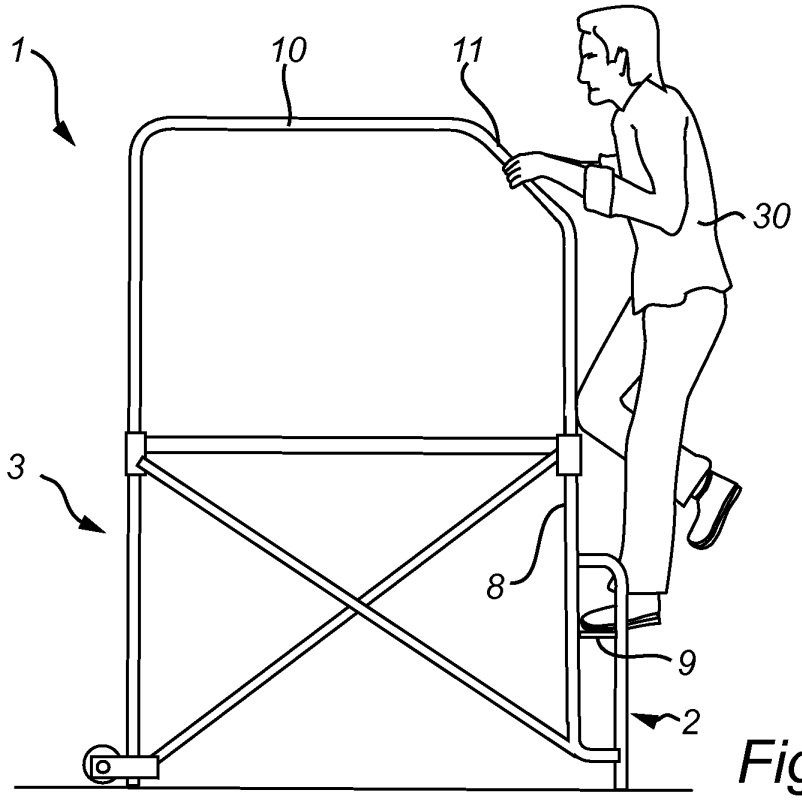

Fig. 8

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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