obviously also further shaft materials such as shaft doors or information systems, etc., which are not illustrated, are installed. A safety component 27 of the fall prevention device 25, in the example a safety cable, is installed above the next region $3u^+$. A detailed construction of one possible embodiment of the fall prevention device 25 is explained later.

The lift cage 43 is suspended at the displaceable platform 20 by way of suspension means, in the example by way of support rods. For that purpose, the displaceable platform is provided with appropriate suspension points. A possible counterweight (not illustrated) is fixed to the lower end of the shaft 3. Depending on the form of suspension, the support means 44 can be detached or at least relieved of load at one of the support means fastening points and can, in the subsequent pulling up of the displaceable platform 20 or in a later work step, simply be pulled afterwards or at the same time. The displaceable platform 20 or the entire engine room can now be raised together with the lift cage 43 by way of a hoist 62, which is suspended at a suspension point 22 of the displaceable platform 20, and moved to an upper use position P2. The upper use position P2 is defined in such a way that a next-higher travel region in the building can be serviced. In order to displace the displaceable platform 20, obviously the deposit device 38 of the displaceable platform 20 is released or retracted so that it does not obstruct displacement of the displaceable platform 20. During the raising and movement, the displaceable platform 20 is secured by means of the fall prevention device 25 against unexpected downward movement. The fall prevention device 25 of the displaceable platform 20 is in that case coupled with the safety brake system 48 of the lift cage 43 by means of an intermediate linkage 46. Thus, in the event of possible slipping down of the displaceable platform 20 with suspended cage 43 the fall prevention device 25 of the displaceable platform 20 and the safety brake system 48 of the lift cage are directly brought into action. The safety brake system 48 of the lift cage 43 thus acts as a component of the fall prevention device.

As soon as the upper use position P2, as apparent in Figure 3, is reached, the deposit device 38 of the displaceable platform 20 is moved out again and the displaceable platform 20 is deposited on the deposit device 38 and fixed by this. The support means 44 can be reconnected - obviously in a length adapted to the new travel range - with the cage 43 and the possible counterweight (not illustrated) and/or fixed at the support means fastening points. The suspension means 44 or the support rods, by means of which the lift cage 43 was suspended at the displaceable platform 20, can be removed. At the same

Patent claims

1. Displaceable platform (20) in a shaft (3) of a lift installation with a fall prevention device (25), wherein
the shaft (3) includes at least one guide rail (23) and the displaceable platform (20) is arranged to be vertically displaceable along the guide rail (23), and
the displaceable platform (20) includes at least one suspension point (45) at which a cage (43) can be suspended so that the displaceable platform (20) is displaceable together with the suspended cage (43),
the fall-prevention device (25) comprising:
- at least one arresting device (26), which is arranged at the displaceable platform (20) and which can be brought into engagement with the guide rail (23), and
- an intermediate linkage (46), which can connect a safety brake system (48) of the cage with a coupling linkage (29) of the displaceable platform (20) so that the safety brake system (48) of the cage (43) can be brought into engagement with the guide rail (23) substantially simultaneously with or slightly before the arresting device (26) arranged at the displaceable platform (20).

2. Displaceable platform (20) according to claim 1, wherein the fall-prevention device (25) further comprises:
- a safety component (27) arranged along a displacement path (S) of the displaceable platform (20) and
- a locking mechanism (28), which is arranged at the displaceable platform (20) and which is engaged with the safety component (27) and connected at least indirectly with the arresting device (26),
wherein the locking mechanism (28) blocks or at least can block a downward movement along the safety component (27), wherein when downward movement of the displaceable platform (20) and corresponding locking of the locking mechanism (28) occur a relative movement of the locking mechanism (28) with respect to the displaceable platform (20) takes place and
wherein the locking mechanism (28) is so connected with the arresting device (26) that it brings the arresting device (26) from a rest position into engagement with the guide rail (23) when relative movement of the locking mechanism (28) with respect to the displaceable platform (20) occurs.

3. Displaceable platform according to claim 2,

- wherein the displaceable platform (20) is arranged to be vertically displaceable along two mutually parallelly extending guide rails (23) and comprises at least two arresting devices (26), wherein each arresting device (26) can co-operate with a respective one of the guide rails (23),
- wherein the locking mechanism (28) can act by way of the coupling linkage (29) on the at least two arresting devices (26) of the displaceable platform (20) and
- wherein the locking mechanism (28) can act on the safety brake system (48) of the cage by way of the intermediate linkage (46) connectible with the coupling linkage (29).

4. Displaceable platform according to claim 3, wherein the at least two arresting devices (26) of the displaceable platform (20) are connected together by means of a connecting linkage (31) so that they are actuable substantially together and the connecting linkage (31) is controlled by the coupling linkage (29).

5. Displaceable platform according to claim 3 or 4, wherein the coupling linkage (29) has a translation which translates the relative movement between locking mechanism (28) and displaceable platform (20) so that an actuating travel until engagement of the arresting device (26) of the displaceable platform (20) and of the safety brake system (48) of the cage with the guide rail (23) is shortened.

6. Displaceable platform according to any one of claims 3 to 5, wherein the coupling linkage (29) is held in a standby position by means of a restoring spring (30), wherein the standby position of the coupling linkage (29) corresponds with the rest position of the arresting device (26).

7. Displaceable platform according to any one of claims 3 to 6, wherein the coupling linkage (29) includes stroke adjustment means (36) and this stroke adjustment means (36) can adjust the rest position of the arresting device (26) so that a required actuation travel from the rest position of the arresting device (26) until engagement of the arresting device (26) with the guide rail (23) can be preset.

8. Displaceable platform according to any one of claims 2 to 7, wherein the locking mechanism (28) is switchable so that a locking function is switched off at least temporarily.

9. Displaceable platform according to any one of claims 2 to 8, wherein the safety component (27) is a safety cable (27a) which runs over at least the displacement path (S) of the displaceable platform (20) and the locking mechanism (28) is executed as a cable securing lock, which engages around the safety cable (27a), or wherein the safety component (27) is the guide rail (23), which is used at the same time for guidance of the displaceable platform (20) and the locking mechanism (28) is constructed to co-operate with a web of the guide rail (23).

10. Displaceable platform according to any one of claims 3 to 9, wherein the fall prevention device (25) is provided with a warning device (37) which makes a rest position or standby position of the coupling linkage (29) recognisable.

11. Displaceable platform according to any one of claims 1 to 10, wherein the displaceable platform (20) comprises deposit devices (38) by means of which the displaceable platform (20) can be fixed at predetermined places in the shaft (3), wherein the displaceable platform (20) comprises at least one lift drive (39) used for driving a lift with at least one cage (43), and wherein the fall prevention device (25) secures the displaceable platform (20) with the lift drive (39) against falling at least during displacement of the displaceable platform (20) from a lower, temporary use position (3u) to an upper use position (3o).

12. Method for securing a displaceable platform (20) in a shaft (3) of a lift installation, wherein the displaceable platform (20) is arranged to be vertically displaceable along a guide rail (23) and wherein a cage (43) can be suspended by way of a suspension point (45) at least temporarily at the displaceable platform (20) so that the displaceable platform (20) can be displaced together with the suspended cage (43), the method comprising the steps of:

- arranging a safety component (27) in the shaft (3) of the lift installation so that the safety component (27) extends over at least an intended displacement path (S) of the displaceable platform (20),
- coupling a locking mechanism (28), which is arranged at the displaceable platform (20), to the safety component (27), which locking mechanism (28) is connected with an arresting device (26) of the displaceable platform (20),
- setting the locking mechanism (28) so that upward movement of the locking mechanism (28) along the safety component (27) is made possible and downward

movement of the locking mechanism (28) along the safety component (27) is blocked,

- connecting a safety brake system (48) of the cage with the locking mechanism (28) so that the safety brake system (48) of the cage (43) can be brought into engagement with the guide rail (23) substantially simultaneously with or slightly ahead of the arresting device (26) arranged at the displaceable platform (20) and
- actuating the safety brake system (48) of the cage (43) and the arresting device (26) of the displaceable platform (20) as a consequence of relative movement between the locking mechanism (28) and the displaceable platform (20) in that the safety brake system (48) and the arresting device (26) are brought from a rest position into engagement with the guide rail (33) by the relative movement of the locking mechanism (28).

13. Method according to claim 12, comprising the further step of:

- manually deactivating a blocking function of the locking mechanism (28) or the connection thereof with the safety brake system (48) and the arresting device (26) so that the displaceable platform (20) can be lowered by at least a predetermined deposit travel without bringing the safety brake system (48) or the arresting device (26) into engagement with the guide rail (23).

obviously also further shaft materials such as shaft doors or information systems, etc., which are not illustrated, are installed. A safety component 27 of the fall prevention device 25, in the example a safety cable, is installed above the next region $3u^+$. A detailed construction of one possible embodiment of the fall prevention device 25 is explained later.

The lift cage 43 is suspended at the displaceable platform 20 by way of suspension means 45, in the example by way of support rods. For that purpose, the displaceable platform is provided with appropriate suspension points. A possible counterweight (not illustrated) is fixed to the lower end of the shaft 3. Depending on the form of suspension, the support means 44 can be detached or at least relieved of load at one of the support means fastening points and can, in the subsequent pulling up of the displaceable platform 20 or in a later work step, simply be pulled afterwards or at the same time. The displaceable platform 20 or the entire engine room can now be raised together with the lift cage 43 by way of a hoist 62, which is suspended at a suspension point 22 of the displaceable platform 20, and moved to an upper use position P2. The upper use position P2 is defined in such a way that a next-higher travel region in the building can be serviced. In order to displace the displaceable platform 20, obviously the deposit device 38 of the displaceable platform 20 is released or retracted so that it does not obstruct displacement of the displaceable platform 20. During the raising and movement, the displaceable platform 20 is secured by means of the fall prevention device 25 against unexpected downward movement. The fall prevention device 25 of the displaceable platform 20 is in that case coupled with the safety brake system 48 of the lift cage 43 by means of an intermediate linkage 46. Thus, in the event of possible slipping down of the displaceable platform 20 with suspended cage 43 the fall prevention device 25 of the displaceable platform 20 and the safety brake system 48 of the lift cage are directly brought into action. The safety brake system 48 of the lift cage 43 thus acts as a component of the fall prevention device.

As soon as the upper use position P2, as apparent in Figure 3, is reached, the deposit device 38 of the displaceable platform 20 is moved out again and the displaceable platform 20 is deposited on the deposit device 38 and fixed by this. The support means 44 can be reconnected - obviously in a length adapted to the new travel range - with the cage 43 and the possible counterweight (not illustrated) and/or fixed at the support means fastening points. The suspension means 45 or the support rods, by means of which the lift cage 43 was suspended at the displaceable platform 20, can be removed. At the same

Patent claims

1. Displaceable platform (20) in a shaft (3) of a lift installation with a fall prevention device (25), wherein
the shaft (3) includes at least one guide rail (23) and the displaceable platform (20) is arranged to be vertically displaceable along the guide rail (23), and
the displaceable platform (20) includes at least one suspension point at which a cage (43) can be suspended so that the displaceable platform (20) is displaceable together with the suspended cage (43),
the fall-prevention device (25) comprising:
- at least one arresting device (26), which is arranged at the displaceable platform (20) and which can be brought into engagement with the guide rail (23), and
- an intermediate linkage (46), which can connect a safety brake system (48) of the cage with a coupling linkage (29) of the displaceable platform (20) so that the safety brake system (48) of the cage (43) can be brought into engagement with the guide rail (23) substantially simultaneously with or slightly before the arresting device (26) arranged at the displaceable platform (20).

2. Displaceable platform (20) according to claim 1, wherein the fall-prevention device (25) further comprises:
- a safety component (27) arranged along a displacement path (S) of the displaceable platform (20) and
- a locking mechanism (28), which is arranged at the displaceable platform (20) and which is engaged with the safety component (27) and connected at least indirectly with the arresting device (26),
wherein the locking mechanism (28) blocks or at least can block a downward movement along the safety component (27), wherein when downward movement of the displaceable platform (20) and corresponding locking of the locking mechanism (28) occur a relative movement of the locking mechanism (28) with respect to the displaceable platform (20) takes place and
wherein the locking mechanism (28) is so connected with the arresting device (26) that it brings the arresting device (26) from a rest position into engagement with the guide rail (23) when relative movement of the locking mechanism (28) with respect to the displaceable platform (20) occurs.

3. Displaceable platform according to claim 2,

- wherein the displaceable platform (20) is arranged to be vertically displaceable along two mutually parallelly extending guide rails (23) and comprises at least two arresting devices (26), wherein each arresting device (26) can co-operate with a respective one of the guide rails (23),
- wherein the locking mechanism (28) can act by way of the coupling linkage (29) on the at least two arresting devices (26) of the displaceable platform (20) and
- wherein the locking mechanism (28) can act on the safety brake system (48) of the cage by way of the intermediate linkage (46) connectible with the coupling linkage (29).

4. Displaceable platform according to claim 3, wherein the at least two arresting devices (26) of the displaceable platform (20) are connected together by means of a connecting linkage (31) so that they are actuable substantially together and the connecting linkage (31) is controlled by the coupling linkage (29).

5. Displaceable platform according to claim 3 or 4, wherein the coupling linkage (29) has a translation which translates the relative movement between locking mechanism (28) and displaceable platform (20) so that an actuating travel until engagement of the arresting device (26) of the displaceable platform (20) and of the safety brake system (48) of the cage with the guide rail (23) is shortened.

6. Displaceable platform according to any one of claims 3 to 5, wherein the coupling linkage (29) is held in a standby position by means of a restoring spring (30), wherein the standby position of the coupling linkage (29) corresponds with the rest position of the arresting device (26).

7. Displaceable platform according to any one of claims 3 to 6, wherein the coupling linkage (29) includes stroke adjustment means (36) and this stroke adjustment means (36) can adjust the rest position of the arresting device (26) so that a required actuation travel from the rest position of the arresting device (26) until engagement of the arresting device (26) with the guide rail (23) can be preset.

8. Displaceable platform according to any one of claims 2 to 7, wherein the locking mechanism (28) is switchable so that a locking function is switched off at least temporarily.

9. Displaceable platform according to any one of claims 2 to 8, wherein the safety component (27) is a safety cable (27a) which runs over at least the displacement path (S) of the displaceable platform (20) and the locking mechanism (28) is executed as a cable securing lock, which engages around the safety cable (27a), or wherein the safety component (27) is the guide rail (23), which is used at the same time for guidance of the displaceable platform (20) and the locking mechanism (28) is constructed to co-operate with a web of the guide rail (23).

10. Displaceable platform according to any one of claims 3 to 9, wherein the fall prevention device (25) is provided with a warning device (37) which makes a rest position or standby position of the coupling linkage (29) recognisable.

11. Displaceable platform according to any one of claims 1 to 10, wherein the displaceable platform (20) comprises deposit devices (38) by means of which the displaceable platform (20) can be fixed at predetermined places in the shaft (3), wherein the displaceable platform (20) comprises at least one lift drive (39) used for driving a lift with at least one cage (43), and wherein the fall prevention device (25) secures the displaceable platform (20) with the lift drive (39) against falling at least during displacement of the displaceable platform (20) from a lower, temporary use position (3u) to an upper use position (3o).

12. Method for securing a displaceable platform (20) in a shaft (3) of a lift installation, wherein the displaceable platform (20) is arranged to be vertically displaceable along a guide rail (23) and wherein a cage (43) can be suspended by way of a suspension point at least temporarily at the displaceable platform (20) so that the displaceable platform (20) can be displaced together with the suspended cage (43), the method comprising the steps of:

- arranging a safety component (27) in the shaft (3) of the lift installation so that the safety component (27) extends over at least an intended displacement path (S) of the displaceable platform (20),
- coupling a locking mechanism (28), which is arranged at the displaceable platform (20), to the safety component (27), which locking mechanism (28) is connected with an arresting device (26) of the displaceable platform (20),
- setting the locking mechanism (28) so that upward movement of the locking mechanism (28) along the safety component (27) is made possible and downward

movement of the locking mechanism (28) along the safety component (27) is blocked,

- connecting a safety brake system (48) of the cage with the locking mechanism (28) so that the safety brake system (48) of the cage (43) can be brought into engagement with the guide rail (23) substantially simultaneously with or slightly ahead of the arresting device (26) arranged at the displaceable platform (20) and
- actuating the safety brake system (48) of the cage (43) and the arresting device (26) of the displaceable platform (20) as a consequence of relative movement between the locking mechanism (28) and the displaceable platform (20) in that the safety brake system (48) and the arresting device (26) are brought from a rest position into engagement with the guide rail (33) by the relative movement of the locking mechanism (28).

13. Method according to claim 12, comprising the further step of:

- manually deactivating a blocking function of the locking mechanism (28) or the connection thereof with the safety brake system (48) and the arresting device (26) so that the displaceable platform (20) can be lowered by at least a predetermined deposit travel without bringing the safety brake system (48) or the arresting device (26) into engagement with the guide rail (23).