~~Patent claims:~~CLAIMS

1. A grate bar relative arrangement comprising a plurality of grate bars (1, 1, 1), the grate bar (1) ~~comprising~~ having a grate bar head (2), two side walls (3, 4), a running surface (5) behind the grate bar head (2) ~~and~~ between the side walls (3, 4) and an underside (6) lying between the side walls (3, 4) ~~disposed below~~under the running surface (5) ~~and between the side walls (3, 4)~~, wherein a recess (7, 8) forms at least one air slot (9, 10) ~~in one side wall (4)~~ between the running surface (5) and the underside (6), ~~***characterized in that*** the at least one air slot (9, 10)~~ the recess (7, 8) is arranged only on one side wall (4) and not ~~in~~ on its opposite side wall (3), a plurality of recesses (7, 8) forming a plurality of air slots are provided one behind the other in the area of the running surface (5), one grate bar (1) with its grate bar head (2) is movably arranged relative to a lower grate bar (1) and a upper grate bar (1) in such a way that the grate bar head (2) of the one grate bar (1) slides over a front area (102) and a rear area (103) of the running surface (5) of the lower grate bar (1), and the grate bar head (2) of the upper grate bar (1) slides relatively over a front area (102) and a rear area (103) of the running surface (5) of the one grate bar (1), ***characterized in that*** the running surface (5) has air slots (9, 10) in the front and in the rear area (102, 103), wherein when the air slots (9, 10) of the lower grate bar (1) are not covered by the one grate bar (1), the air slots (9, 10) of the one grate bar (1) are covered by the upper grate bar (1), when only the air slot (10) of the lower grate bar (1) is covered by the one grate bar (1), only the air slot (10) of the one grate bar (1) is covered by the upper grate bar (1), and when the air slots (9, 10) of the lower grate bar (1) are covered by the one grate bar (1), the air slots (9, 10) of the one grate bar (1) are not covered by the upper grate bar (1).

2. The grate bar relative arrangement~~, in particular~~ according to claim 1, ***characterized in that*** the two recesses (7, 8) forming two air slots are provided

one behind the other~~side wall (4) has at least one air slot (9, 10) only~~ in the area of the running surface (5).

3. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** the side wall (4) has at least one ~~the~~ air slot (9, 10)~~ has a cross-sectional area (13) which expands from the running surface (5) to the underside (6)~~ only in the area of the running surface (5).

4. The grate bar relative arrangement according to one of the preceding claims, ***characterized in that*** the air slot (9, 10) has a cross-sectional area (13) which widens from the running surface (5) towards the underside (6).

~~4~~5. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** the grate bar head (2, 33) has as a lower end (34) comprising a sliding surface (35) with a cutting edge (37), which has ~~either a contact surface extending in~~ an acute angle (38) or a curve with a radius of less than 200 mm and in particular around a circular sector of less than 80º between sliding surface (35) and pushing surface (36).

~~5~~6. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** the grate bar head (2) has as a lower end comprising a sliding surface (35) with a pushing edge (41), which has ~~a contact surface extending in~~ an obtuse angle (42) or a curve with a radius of more than 200 mm and in particular around a circular sector of more than 100º between sliding surface (35) and pushing surface (40).

~~6~~7. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** it ~~has~~ comprises a latch (60, 61), which ~~has~~ is in one or two parts.

~~7~~8. The grate bar relative arrangement according to claim ~~6~~7, ***characterized in that*** the latch (60, 61) ~~has~~ comprises a screw (62, 63).

~~8~~9. The grate bar relative arrangement according to claim ~~7~~8, ***characterized in that*** the screw (62, 63) has a screw head (66) which has a polygonal socket (67).

~~9~~10. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** it ~~has~~ comprises a latch (60, 61)~~, which has~~having a latch head with a round ~~cross-section~~cross-section.

~~10~~11. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** it ~~has~~ comprises only one latch (60, 61).

~~11~~12. The grate bar relative arrangement~~, in particular~~ according to one of ~~the preceding~~ claims 7 to 11, ***characterized in that*** the underside (6) ~~is substantially flat~~ between the side walls (3, 4) is substantially flat in the area of the latch (60, 61).

~~12~~13. The grate bar relative arrangement~~, in particular~~ according to one of ~~the preceding~~ claims 7 to 12, ***characterized in that*** it has a latch window (70, 71), into which ~~the~~ a latch (60, 61) of an adjacent grate bar (1) ~~may~~ can engage, and which has an opening on the side opposite the running surface (5).

~~13~~14. The grate bar relative arrangement~~, in particular~~ according to one of the preceding claims, ***characterized in that*** it ~~has~~ comprises a core ~~bar~~ rod (80)~~, which is~~ embedded into the grate bar (1).

~~14. A grate bar arrangement (90) comprising multiple grate bars (91, 92, 93) each comprising a running surface (98, 99) and a grate bar head (100, 101), in which an upper grate bar (93) with its grate bar head (101) is moveably arranged relative to a lower grate bar (91) in such a way that the grate bar head (101) may slide over a front area (102), and a rear area (103) of the running surface (98, 99) of the grate bar (91), ***characterized in that*** the running surface (98, 99) has air slots (94, 95, 96, 97) in the front and rear areas (102, 103) and the grate bar head~~

~~(100, 101) is displaceable relative to these air slots (94, 95, 96, 97) in such a way that the opening cross section of all air slots (94, 95, 96, 97) remains constant.~~

~~15. A method for operating a grate bar arrangement comprising multiple grate bars (91, 92, 93) each comprising a running surface (98, 99) and a grate bar head (100, 101), in which an upper grate bar (93) with its grate bar head (101) is moved relative to a lower grate bar (91) in such a way that the grate bar head (101) slides over a front area (102), and a rear area (103) of the running surface (98, 99) of the grate bar (91), ***characterized in that*** the running surface (98, 99) has air slots (94, 95, 96, 97) in the front and rear areas (102, 103) and the grate bar head (100, 101) is displaced relative to these air slots (94, 95, 96, 97) in such a way that the opening cross section of all air slots (94, 95, 96, 97) remains constant.~~

15. A method of operating a grate bar relative arrangement with a plurality of grate bars (1, 1, 1), the grate bar (1) having a grate bar head (2), two side walls (3, 4), a running surface (5) behind the grate bar head (2) between the side walls (3, 4) and an underside (6) lying between the side walls (3, 4) under the running surface (5), wherein a recess (7, 8) forms at least one air slot (9, 10) between the running surface (5) and the underside (6), the recess (7, 8) is arranged only on one side wall (4) and not on its opposite side wall (3), a plurality of recesses (7, 8) forming a plurality of air slots are provided one behind the other in the area of the running surface (5), one grate bar (1) with its grate bar head (2) is moved relative to a lower grate bar (1) and a upper grate bar (1) in such a way that the grate bar head (2) of the one grate bar (1) slides over a front area (102) and a rear area (103) of the running surface (5) of the lower grate bar (1) and the grate bar head (2) of the upper grate bar (1) slides relatively over a front area (102) and a rear area (103) of the running surface (5) of the one grate bar (1), ***characterized in that*** the running surface (5) has air slots (9, 10) in the front and in the rear area (102, 103), when the air slots (9, 10) of the lower grate bar (1)

are not covered by the one grate bar (1) the air slots (9, 10) of the one grate bar (1) are covered by the upper grate bar (1), wherein when only the air slot (10) of the lower grate bar (1) is covered by the one grate bar (1) only the air slot (10) of the one grate bar (1) is covered by the upper grate bar (1), and when the air slots (9, 10) of the lower grate bar (1) are covered by the one grate bar (1) the air slots (9, 10) of the one grate bar (1) are not covered by the upper grate bar (1).