CLAIMS

1. Opening/closing and hooking/releasing system of a suitcase (10) for motorcycles provided with a lower shell (12), that forms the body of the suitcase (10), and an upper shell (14), that forms the cover and is hinged at the rear to the lower shell (12), on the bottom portion (16) of the lower shell (12) being provided reversible hooking means to a support plate (18) fixed to the motorcycle, on the external surface of the lower shell (12) a plaque (20) being made integral on which are obtained a first release button (22) of the suitcase (10) with respect to the support plate (18), operatively connected to said reversible hooking means, a second opening button (24) of the upper shell (14), operatively connected to hooking means (36, 38) hinged to the plaque (20) and able to selectively engage with a corresponding hooking means (42) integral with the upper shell (14), and a locking block (26), said first button (22) being mobile with a rectilinear motion along a direction substantially perpendicular to the extension direction of one of the side walls (58) of the lower shell (12), to the locking block (26) being rigidly constrained a rotatable under-locking ring (30), provided with a pair of counter-posed protruding teeth (32, 34), characterised in that also said second button (24) is mobile with a rectilinear motion along a direction substantially perpendicular to the extension direction of one of the

side walls (58) of the lower shell (12), said rotatable under-locking ring (30) being able to rotate in support on said side wall (58) to shift from a first simultaneous blocking position of the rectilinear motion of said first (22) and second (24) buttons to a second simultaneous release position of the rectilinear motion of said first (22) and second (24) button.

2. Opening/closing and hooking/releasing system according to claim 1, characterised in that said hooking means hinged to said plaque (20) comprise an intermediate lever (36) operatively connected to a hooking rocker element (38), both the intermediate lever (36) and the hooking rocker element (38) being hinged around a pin (40) integral with said plaque (20), the hooking rocker element (38) being then able to selectively engage with the corresponding hooking means (42) integral with said upper shell (14).

3. Opening/closing and hooking/releasing system according to claim 2, characterised in that a first protruding tooth (32) of the rotatable under-locking ring (30) is able to engage, in said first hooking position, with a corresponding tooth (50) integral with the first button (22) which, not being able to slide with a rectilinear motion towards the inside of the suitcase (10), cannot move a latch (52) that remains engaged with a hooking prong (54) belonging to said reversible hooking means.

4. Opening/closing and hooking/releasing system

according to claim 3, characterised in that a second protruding tooth (34) of the rotatable under-locking ring (30) is positioned, in said first blocking position, between the lower end (56) of the intermediate lever (36) and the side wall (58) of the lower shell (12), so that it is impossible to move the second button (24) along a rectilinear direction and, consequently, a movement cannot be transmitted to the hooking rocker element (38), which therefore keeps the suitcase (10) in a closing condition.

5. Opening/closing and hooking/releasing system according to any one of claims 2 to 4, also comprising at least one spring (44) constrained to the plaque (20) from one side and to the hooking rocker element (38) from the other side, said at least one spring (44) operating by compression to maintain said hooking rocker element (38) in the hooking or closing position of the upper shell (14).

6. Opening/closing and hooking/releasing system according to any one of claims 1 to 5, also comprising pushing elastic means (46, 48) between the upper shell (14) and the lower shell (12), so as to increase the displacement of said upper shell (14) from said lower shell (12) in the releasing or opening position.

7. Opening/closing and hooking/releasing system according to claim 6, characterised in that said pushing elastic means comprise a pre-opening slider (46) that is pushed to elastically protrude from the

edge of the upper shell (14) by means of at least one pre-opening spring (48), so as to react against the corresponding edge of the lower shell (12), said at least one pre-opening spring (48) being constrained to the hooking means (42) integral with the upper shell (14) from one side and to said pre-opening slider (46) from the other side.

8. Opening/closing and hooking/releasing system according to any one of the preceding claims, also comprising an electromagnetic actuator (62) housed in a suitable seat (64) provided inside the lower shell (12) and controllable to act on at least one (38) of the hooking means hinged to the plaque (20), to move it to the releasing or opening position of the upper shell (14).

9. Opening/closing and hooking/releasing system according to claim 8, characterised in that the electromagnetic actuator (62) comprises a rod (68) movable with a rectilinear motion, able to cause the rotation of a cam (70) inserted in the seat (64), the rotation of said cam (70) causing in turn the rectilinear motion of a slider (72) able to act on said at least one (38) of the hooking means hinged to the plaque (20), to move it to the releasing or opening position of the upper shell (14).

10. Opening/closing and hooking/releasing system according to claim 8 or 9, characterised in that the electromagnetic actuator (62) is controllable by means

of a remote control actuating a receiving electric circuit (66), housed in the seat (64), able to feed said electromagnetic actuator (62).

CLAIMS

Claim 1. An opening/closing and hooking/releasing system of a suitcase for motorcycles provided with a lower shell, that forms a body of the suitcase, and an upper shell, that forms a cover and is hinged to the lower shell, on a bottom portion of the lower shell being provided reversible hooking means to a support plate fixed to the motorcycle, on an external surface of the lower shell a plaque being made integral on which are obtained a first release button of the suitcase with respect to the support plate, operatively connected to said reversible hooking means, a second opening button of the upper shell, operatively connected to hooking means hinged to the plaque and able to selectively engage with a corresponding hooking means integral with the upper shell, and a locking block, said first button being mobile with a rectilinear motion along a direction substantially perpendicular to an extension direction of one of side walls of the lower shell, to the locking block being rigidly constrained a rotatable under-locking ring, provided with a pair of counter-posed protruding teeth, wherein said second button is mobile with a rectilinear motion along a direction substantially perpendicular to the extension direction of one of the side walls of the lower shell, said rotatable under-locking ring being able to rotate in support on said side wall to shift from a first simultaneous blocking position of the rectilinear motion of said first and second buttons to a second simultaneous release position of the rectilinear motion of said first and second button, wherein said hooking means hinged to said plaque comprise an intermediate lever operatively connected to a hooking rocker element, both the intermediate lever and the hooking rocker element being hinged around a pin integral with said plaque, the hooking rocker element being then able to selectively engage with the corresponding hooking means integral with said upper shell.

Claim 2. The opening/closing and hooking/releasing system according to claim 1, wherein a first protruding tooth of the rotatable under-locking ring is able to engage, in said first hooking position, with a corresponding tooth integral with the first button which, not being able to slide with a rectilinear motion towards the inside of the suitcase, cannot move a latch that remains engaged with a hooking prong belonging to said reversible hooking means.

Claim 3. The opening/closing and hooking/releasing system according to claim 2, wherein a second protruding tooth of the rotatable under-locking ring is positioned, in said first blocking position, between the lower end of the intermediate lever and the side wall of the lower shell, so that it is impossible to move the second button along a rectilinear direction

and, consequently, a movement cannot be transmitted to the hooking rocker element, which therefore keeps the suitcase in a closing condition.

Claim 4. The opening/closing and hooking/releasing system according to claim 1, also comprising at least one spring constrained to the plaque from one side and to the hooking rocker element from the other side, said at least one spring operating by compression to maintain said hooking rocker element in the hooking or closing position of the upper shell.

Claim 5. The opening/closing and hooking/releasing system according to claim 1, also comprising pushing elastic means between the upper shell and the lower shell, so as to increase the displacement of said upper shell from said lower shell in the releasing or opening position.

Claim 6. The opening/closing and hooking/releasing system according to claim 5, wherein said pushing elastic means comprise a pre-opening slider that is pushed to elastically protrude from an edge of the upper shell by means of at least one pre-opening spring, so as to react against the corresponding edge of the lower shell, said at least one pre-opening spring being constrained to the hooking means integral with the upper shell from one side and to said pre-opening slider from the other side.

Claim 7. The opening/closing and hooking/releasing system according to claim 1, also comprising an electromagnetic actuator housed in a suitable seat provided inside the lower shell and controllable to act on at least one of the hooking means hinged to the plaque, to move it to the releasing or opening position of the upper shell.

Claim 8. The opening/closing and hooking/releasing system according to claim 7, wherein the electromagnetic actuator comprises a rod movable with a rectilinear motion, able to cause the rotation of a cam inserted in the seat, the rotation of said cam causing in turn the rectilinear motion of a slider able to act on said at least one of the hooking means hinged to the plaque, to move it to the releasing or opening position of the upper shell.

Claim 9. The opening/closing and hooking/releasing system according to claim 7, wherein the electromagnetic actuator is controllable by means of a remote control actuating a receiving electric circuit, housed in the seat, able to feed said electromagnetic actuator.