

CLAIMS

1. A cylinder lock (1) and key (2) combination, comprising
- a cylinder shell (140),
 - 5 - a key plug (130) which is rotatably mounted in said shell,
 - a longitudinal key slot (100) extending along said key plug in parallel to the rotational axis thereof for receiving a key blade (200) having, at a side surface (201) thereof, a longitudinally extending groove (202) with a side wall (203)
 - 10 forming a longitudinally extending coded surface (203),
 - at least one locking tumbler assembly (110) having a body segment (113) with a contact portion (115) reaching into said key slot so as to engage with said coded surface (203) of a properly shaped key blade being inserted into said key slot,
 - 15 and
 - at least one cavity (120) located at a transversal side of said key slot (100) in said key plug (130), said cavity accommodating an associated one of said at least one tumbler assembly and guiding the latter for elevational movement
 - 20 therein,
 - said at least one locking tumbler assembly (110) comprising a pair of adjacent tumbler body segments (113, 114) accommodated in the same cavity, and
 - each tumbler body segment (113, 114) having an associated
 - 25 contact portion (115, 116) reaching into said key slot (100), **characterised** in that
 - said adjacent tumbler body segments (113, 114) in said pair are elevationally movable independently of each other in said cavity so as to be individually displaced into respective
 - 30 elevational positions, and
 - said associated contact portions (115, 116) in said pair are axially separated in the longitudinal direction of the key plug such that these contact portions are located at a

longitudinal distance from each other and will be positioned at elevationally specific and generally different levels when being engaged by said coded surface (203) upon insertion of said key blade (200) into said key slot (100)

5 - whereby the tumbler body segments (113, 114) in each pair are displaceable into a number of different positions relative to each other representing different codes.

10 2. A cylinder lock and key combination as defined in claim 1, wherein each segment in said pair of adjacent tumbler body segments (113, 114) is guided in a respective portion of said cavity (120).

15 3. A cylinder lock and key combination as defined in claim 2, wherein said pair of adjacent tumbler body segments (113, 114) have supplementary cross-sections, which together substantially correspond to the cross-section of said cavity (120).

20 4. A cylinder lock and key combination as defined in claim 3, wherein said adjacent tumbler body segments (113, 114) of said pair are partially defined by part-cylindrical surface portions being guided by wall portions defining said cavity (120).

25 5. A cylinder lock and key combination as defined in claim 3 or 4, wherein said adjacent tumbler body portions of said pair have mutually engaging surface portions (113a, 114a) being in sliding engagement with each other.

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6. A cylinder lock and key combination as defined in claim 5, wherein said mutually engaging surface portions (113a, 114a) are substantially planar.
- 5 7. A cylinder lock and key combination as defined in any one of the preceding claims, wherein said key plug (130) contains a row of cavities (120), at least one of which accommodating a pair of adjacent tumbler body segments (113, 114).
- 10 8. A cylinder lock and key combination as defined in any one of the preceding claims, wherein said key plug (130) includes at least one locking tumbler assembly (113,114) on each transversal side of said key slot (100).
- 15 9. A cylinder lock and key combination as defined in any one of the preceding claims, wherein said pair of adjacent tumbler body segments (113, 114) cooperate with a side bar (150) being accommodated in a longitudinal recess (151) in said cylinder shell (140), said side bar (150) being adapted to normally
20 lock the key plug against rotation in said shell and to be displaceable into a releasing position upon insertion of a properly coded key blade (200) into said key slot (100).
- 25 10. A cylinder lock and key combination as defined in any one of the preceding claims, wherein said contact portions of said tumbler body segments (113,114) are constituted by outwardly projecting fingers (115,116).
- 30 11. A cylinder lock and key combination as defined in claim 10, wherein said fingers (115, 116) are positively guided in said longitudinally extending groove (202) upon insertion of said key blade into said key slot.

12. A cylinder lock (1) having at least one pair of
independently movable tumbler body segments (113,114)
accommodated in a cavity (120) in a key plug (130) forming
part of a cylinder lock in a lock and key combination as
5 defined in any one of the preceding claims.

13. A key blade (200) having, at a side surface (201) thereof,
a longitudinally extending groove (202) with a side wall (203)
forming a longitudinally extending coded surface (203) with at
least one pair of neighbouring code surface portions (204,
10 205) located at elevationally specific and generally different
levels for co-operation with the respective contact portions
of a pair of adjacent tumbler body segments of a lock as
defined in claim 12.

14. A key blade as defined in claim 13, wherein said
15 longitudinally extending groove (202) positively guides said
respective contact portions, constituted by outwardly
projecting fingers, when the key blade is inserted into a
lock.

15. A key blade as defined in claim 13 or 14, wherein said key
20 blade (200) is symmetrical with longitudinal coded surfaces on
each side thereof.

16. A key blade as defined in any one of claims 13-15, wherein
said coded surface (203) comprises a longitudinal row of pairs
25 (204, 205) of neighbouring code surface portions.

17. A key blank for producing a key blade as defined in any
one of claims 13-16, said key blade having, at a side surface
thereof, a longitudinally extending coded surface (203), said
30 coded surface (203) being cut out from at least one material
portion at the side of the key blade and having a pair of

neighbouring code surface portions (204,205) for cooperation with the respective contact portions of a pair of adjacent tumbler segments in a lock as defined in claim 12.

- 5 18. A key blank as defined in claim 17, wherein the coded surface (203) is undercut.