

Title: **Lock with a catch bolt protruding out from the lock casing**

Description

The invention relates to a lock according to the generic part of patent claim 1, wherein a catch bolt protrudes out from the lock casing, which catch bolt's tail, displaceably guided inside the lock casing, is retractable through the contact of an arm of a spring-cushioned lever handle follower and can be moved forward into locking action and backward through locking actuation by means of a key, a closing cylinder, a second follower or the like, after preceding release of a dead locking device.

Such lock, serving as lock for glass doors, is known on the market. The tail of a catch bolt is journalled about a tenon of a dead locking device, by which it is backwards overlapped, and which intersects a closing contact aperture of the catch bolt tail and which stretches out with an angled end into the moving area of the follower. Furthermore, the dead locking device is equipped with a blocking projection, which depending on the catch bolt's position is positioned in front of or behind a stopping shoulder of the lock casing. In this embodiment, the displacement of the catch bolt by means of the lever handle follower is always realised through the dead locking device.

The object of the invention is to solve the problem of designing a lock of this species with advantageous locking technique while realising a simple construction.

This problem is solved by the features according to patent claim 1, whereby a dead locking device, liftable by a closing bit, is realised as one-armed lever, that itself presents a turn



aperture into which engages a catch bolt tail-sided turn pin and which is supported about a casing-sided stay tenon arranged above the catch bolt head.

The consequence of this species' conception is a usually
5 upright lock excelling besides simple construction in
advantageous locking technique design. The dead locking
device is no longer supported at the catch bolt tail, but around
a casing-sided stay tenon arranged above the catch bolt head.
The opening forces acting upon the catch bolt head, in case
10 the catch bolt is moved forward into the locking position, are
now directly guided via the turn pin into the dead locking device
and thus into the casing-sided stay tenon, such that high
reversed rotation forces can be absorbed without damage.
Moving the catch bolt forward into locking action and backward
15 requires the preceding release of the dead locking device and
the clearing of the turn pin, such that the catch bolt is lockable
by means of the closing bit acting upon the catch bolt tail. It is
provided for that the turn aperture is located at the free end of
the dead locking lever and the contact point for the closing bit
20 is almost located in its center. This results in advantageous
leverage actions together with smooth locking operation.
Another advantageous feature is the fact that a dead locking
lever is spring-cushioned with regard to a lateral casing wall.
The dead locking lever thus, according to its definition, takes its
25 predetermined end position. On the one hand, it allows the
catch bolt's retracting, when pulling close a door equipped with
the lock; on the other hand, in case the catch bolt is moved
forward into locking action, the dead locking lever blocks the
backward displacement.

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Another advantageous feature is provided by the fact that the catch bolt tail presents a solidly thereto bonded cam projection upon which acts an arm of the lever handle follower and which is displaced out of the swivelling range in case the catch bolt is moved forward into the locking position. Contrary to prior art, the closing bit as well as the lever handle follower act upon the catch bolt tail. The dead locking device is freed from charge exerted by the lever handle follower. In case the catch bolt has not been moved forward into the locking position, the cam projection stretches out into the area of the arm of the lever handle follower. Once the catch bolt has been moved forward into the locking position, the lever handle follower idles. The cam projection just drags the arm of the lever handle follower against the catch bolt being meanwhile pushed by the spring resistance, such that the follower according to its definition always returns into the initial position.

Furthermore, from the perspective of locking technique, it is favourable the cam projection presents a bevelled designed sliding surface formed for the contact of the nose of the arm. For this reason, identical leverage conditions prevail when retracting the catch bolt by means of the lever handle follower. Another advantageous feature is realised in that a spring holds the arm of the lever handle follower in place and in an orientation parallel to the bolt displacement direction. Therefore, the lever handle follower can, directly during swivelling, get into effective connection with the cam projection.

To solve the problem of the invention for a lock with a catch bolt protruding out from the lock casing, which catch bolt's tail, displaceably guided in the lock casing, is retractable by means



of the contact of an arm of a spring-cushioned lever handle follower, it is furthermore provided the spring resistance of the spring, which cushions the lever handle follower, is adjustable. Due to this fact, it is possible to allocate either a lever handle or
5 a turning knob to the follower. In case the lever handle follower is equipped with a lever handle, the existing leverage is more important, in that case, it is desired to have a higher spring resistance. In case however a turning knob is used, the spring resistance can be lowered, guaranteeing nevertheless an easy
10 closing rotation of the turning knob. For this purpose, a spring contact point, fixed to the casing, is displaceable, for convenience this can be done from the lock casing's outside. It is furthermore provided that the spring acting upon the follower arm is a tension spring. In this case, the spring contact point is
15 realised by a pin that can be displaced inside the lock casing. With the intention to change the spring resistance, the pin is displaceable between two positions in a longitudinal slot. In detail this means, due to its bayonet-type fastening, the pin is hold in one of its two final positions. For this purpose, at the
20 end sides, the pin is provided with flattenings respectively on opposite sides, which in the one position, in the slot sections of the slots arranged in the lock cover and in the lock bottom are parallel to the slot walls, and in the other position, in a section enlarged slot section they are arranged transversely with
25 regard to the slot walls. Changing the spring resistance simply requires turning the pin such that the flattenings come into a truly aligned position with regard to the slot walls. Therefore, upon a previous 90° rotation, the pin can be displaced. On the front it is therefore provided with an opening for a tool contact,

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which can be designed for example in form of a groove, allowing a screwdriver point for example to engage. A self-displacement of the pin is prevented by the fact that the enlarged slot section builds support surfaces for the plane
5 location of the flattening borders. In this version too, it is provided that the catch bolt tail can be additionally moved forward into locking action and backward by the actuation of a closing bit, after a previous displacement of a dead locking device. Technical guidance advantages result from the fact
10 that the catch bolt tail is guided close between both lateral lock walls and is cushioned by a tension spring in locking direction. Finally one favourable feature of the invention resides also in the fact that the lever handle follower is provided with a fork sparing defining a clearance and thus embraces a lock casing-sided stop tenon.
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Hereinafter the invention is explained in several embodiment examples on the basis of diagrammatic drawings. It shows:

Figure 1: a view of a lock according to a first embodiment, wherein the catch bolt is displaceable by means
20 of a lever handle as well as by a profile closing cylinder.

Figure 2: an illustration like in figure 1, however with removed lock cover, representing the position in
25 which the catch bolt can be moved backward by the lever handle follower.

Figure 3: a subsequent illustration of figure 2, wherein the catch bolt is retracted by the lever handle follower.

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- Figure 4: an illustration comparable to figure 2, but with the catch bolt moved forward into the locking position.
- 5 Figure 5: an illustration comparable to figure 2, wherein the spring resistance acting upon the lever handle follower is set to a lower value.
- Figure 6: an enlarged illustration of a section according to line VI - VI in figure 1.
- Figure 7: a separate illustration of a catch bolt.
- 10 Figure 8: a top view on figure 7, partially opened.
- Figure 9: a view of the dead locking device.
- Figure 10: a top view on the dead locking device.
- Figure 11: a view of the lock according to a second embodiment example with removed lock cover, whereby the catch bolt is displaceable by means of the closing bit of a second follower, the catch bolt being in normal position.
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- Figure 12: an illustration comparable to figure 11, in this case respectively with a catch bolt retracted by the lever handle follower.
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- Figure 13: a view of the catch bolt in the locking position.
- Figure 14: an illustration corresponding to figure 11, with the difference thereto that the tension spring acts with lower spring resistance upon the lever handle follower.
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- Figure 15: a view of a lock according to a third embodiment without lock cover, whereby the lever handle follower acts upon the center part of the catch bolt tail.
- 5 Figure 16: an illustration like figure 15, however the catch bolt being retracted by the lever handle follower.
- Figure 17: an illustration comparable to figure 15, with the difference thereto that the lever handle follower is exposed to lowered spring resistance.
- 10 Figure 18: a view of a lock according to a fourth embodiment, whereby the catch bolt can be exclusively retracted by the lever handle follower which is arranged in the rear part of the lock, this applies to the normal position of the catch bolt.
- 15 Figure 19: the subsequent illustration of figure 18, however, the catch bolt being retracted by the lever handle follower.
- Figure 20: the illustration comparable to figure 18, in this case the tension spring acts with reduced resistance upon the lever handle follower.
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A lock 1 according to a first embodiment comprises a lock casing 2 having a longish design such that the length of the lock casing 2 approximately corresponds to the double width of the lock casing. Two longitudinal lateral walls 4, 5 are erected upright on a lock bottom 3, which in a backward area of the lock casing 2 are linked to each other by a spherical formed back wall 6. A front wall 7 of the lock casing 2, however is right-angled with regard to the longitudinal lateral walls 4, 5.

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Inside the lock casing 2, a catch bolt tail 8 of catch bolt 9 is guided between both lateral lock walls 4, 5, which catch bolt's head 10 is equipped with a latch ramp 10' that penetrates an aperture 11 in the front wall 7. The catch bolt tail 8 is fork-type executed. One end of a tension spring 13 acts upon a tenon 12 stretching out from a shorter fork leg 8'. The other spring end embraces a stay tenon 14 of the lock bottom 3, thereby the catch bolt 9 is spring loaded in forward moving direction.

Another fork leg 8" almost corresponds to the triple length of the fork leg 8'. On the inside, the fork leg 8" forms a closing contact aperture 15. Subsequently is arranged a turn pin 16 with rectangular section. Above which, the fork leg 8" is provided in the end area with a longitudinal slot 17, which extends in the displacement direction of the catch bolt and into which engages a lock bottom-sided guiding tenon 18. At its free end, the fork leg 8" of the catch bolt tail 8 builds a cam projection 19 for the contact of an arm 20 of a lever handle follower 21, which is suspended in the rear part of the lock casing 2 between the lock bottom 3 and a lock cover 22 arranged parallel thereto. The cam projection 19 has got a bevelled sliding surface 23 for the contact of a nose 20' of the arm 20, whereby the nose 20' in the normal position of the catch bolt 9 is positioned close below the cam projection 19, such that the forward moving displacement of the catch bolt 9 is not impeded.

The normal position of the catch bolt 9, compare with figure 2, is maintained by a dead locking lever 24. The dead locking lever 24 is designed as one-armed lever, which forms two turn apertures 25, 26 one positioned behind the other, at its narrow

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side oriented towards the turn pin 16. A center web 27 divides this narrow side. In the catch bolt's 9 normal position, the center web 27 extends in front of the turn pin 16 and thus blocks the forward moving displacement of the catch bolt 9.

5 Following the turn aperture 26, the dead locking lever 24 builds an arcuate thickening 28, which stretches into the closing contact aperture 15. The thickening 28 represents the closing bit contact point and extends approximately in the center of the one-armed dead locking lever 24. The other end of the dead

10 locking lever 24 is suspended about a casing-sided stay tenon 29 above the catch bolt head 10. The respective turn apertures 25, 26 however are located at the free end of the dead locking lever 24, said free end builds an angle 30. By means of said angle, the dead locking lever 24 is supported on

15 a lock bottom-sided projection 31, whereby the dead locking lever 24 is maintained in a defined normal position. A pressure spring 32 acts upon the dead locking lever 24, loading it in the normal position, as represented according to figure 2. This pressure spring 32, itself, finds a support at the lateral casing

20 wall 4.

On the opposite side of its arm 20, the lever handle follower 21 is provided with a fork spring 33 defining a clearance, into which spring reaches a lock casing-sided stop tenon 34. In the normal position of lock 1, the lever handle follower 21 takes

25 the position as illustrated in figure 2, and is trapped in this position by means of the spring 35 acting upon the arm 20. The spring 35 is designed as tension spring. Its one end embraces a tenon projection 36 of the arm 20. However the spring contact point P, fixed to the casing, is adjustable for



modification of the spring resistance. For this purpose, the spring contact point P is displaceable. With regard to the spring 35, it is a tension spring. A pin 37, displaceable inside the casing 2, builds the spring contact point P fixed to the casing. This pin is displaceable between two positions in a longitudinal slot 38 of the lock bottom 3 and the lock cover 22. The longitudinal slot's 38 orientation follows the direction of the arm 20 of the lever handle follower 21. The longitudinal slot 38 is designed such that the pin 37 is maintained in one of its two end positions by means of a bayonet-type fastening. On its end sides, the pin 37 has got respectively opposite flattenings 39. The distance between them is slightly shorter than the distance between the slot walls 40 parallel to each other of the slot sections 41 of the lock bottom 3 and of the lock cover 22. In this case, the slot section 41 is positioned at a shorter distance to the arm 20 than the slot section 42, which is enlarged with regard to the slot section 41, and which inside wall is adapted to the exterior wall shape of the pin 37. In case the pin 37 enters the slot section 42 and the flattenings 39, provided on the end sides of the pin 37, are transverse with regard to the slot walls 40, the spring resistance of the spring 35 is higher, compare with the pin's 37 pulled position illustrated in figure 6.

In order to prevent the pin 37 from self-displacement, the enlarged slot section 42 in the lock bottom 3 and in the lock cover 22 builds support surfaces 43 such to planely locate the border areas of the flattenings 39. These support surfaces 43 are transversely oriented with regard to the slot walls 40.

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After preceding 90° rotation, the pin 37 can be transferred into the dash-and-dot position according to figure 6 and into the position represented by solid lines according to figure 5, such that the spring 35 acts with lower resistance on the lever
5 handle follower 21. This case is chosen when a not-shown turning knob is assigned to the lever handle follower 21. In case however, the lever handle follower 21 is equipped with a door lever handle 44, as illustrated by a dash-and-dot line in figure 1, the pin 37 takes the position, where it is placed in the
10 enlarged slot section 42. For the purpose of transferring the pin 37 from outside, the fronts of the pin 37 are provided with a tool contact opening 37' for the application of a screwdriver.

Moving the catch bolt 9 forward into locking action respectively backward is possible by means of a profile closing cylinder 45
15 penetrating the lock cover 22 and the lock bottom 3. Its closing bit 46 interacts with the dead locking lever 24 as well as with the closing contact aperture 15 of the catch bolt tail 8.

The following operation is obtained:

In case a not-shown door equipped with the lock 1 is pulled in
20 its closed position, the catch bolt 9, because of its latch ramp 10', withdraws in lock-inward direction, whereby the turn pin 16 moves within the turn aperture 25. When the door is in the closed position, due to the load of the tension spring 13, the catch bolt 9 can then move forward into the normal position,
25 according to figure 2. This position allows to retract the catch bolt 9 by the actuation of the lever handle, compare with figure 3. In that case, a nose 20' of the arm 20 of the lever handle follower 21 strikes the sliding surface 23 of the catch bolt tail 8

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and thus moves the catch bolt 9 lock-inwards. The rotation displacement of the lever handle follower 21 is limited by the fact that a fork leg 33' strikes the stop tenon 34 of the lock casing 2. By this action, the spring 35 is extended. This
5 relates likewise to the tension spring 13 acting upon the catch bolt 9. When the door lever handle 44 is released, the lever handle follower 21 returns into its initial position, where another fork leg 33" strikes the other side of the stop tenon 34. Furthermore, the tension spring 13 guides the catch bolt 9 back
10 into its normal position according to figure 2.

When the door is pulled only into the closed position, it is possible to move the catch bolt 9 forward into locking action by means of the profile closing cylinder 45. Upon counter-clockwise rotating a closing bit 46, it thereby acts upon the
15 dead locking lever 24 at its thickening 28 and thus lifts off the dead locking lever 24 such that then the center web 27 is positioned above the turn pin 16. At that moment, through the engagement of the closing bit 46 into the closing contact aperture 15, the catch bolt 9 can be moved forward into the
20 locking position according to figure 4. Upon the closing rotation of the closing bit 46, it releases the dead locking lever 24 for spring-loaded pivoting such that the center web 27 moves behind the turn pin 16, thus the turn pin 16 is placed in the turn aperture 26. For this reason, the catch bolt 9 can not
25 be pushed back. Corresponding push-back forces are guided via the dead locking lever 24 into the lock bottom-sided stay tenon 29. The backward moving displacement of the catch bolt 9 can only be realised by the key actuation and more precisely after preceding lifting of the dead locking lever 24 and the

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displacement of catch bolt 9 against the resistance of the tension spring 13.

In case a not-shown turning door knob is used instead of the door lever handle 44, the spring resistance acting upon the lever handle follower 21 has to be reduced, therefore the pin 37 is placed into the position according to figure 5.

With the catch bolt moved forward into the locking position, the cam projection 19 is placed outside the moving range of the arm 20 of the lever handle follower 21, such that a displacement of the lever handle follower 21, either by means of a door knob or a door lever handle 44, does not result in a contact at the catch bolt tail 8.

The further embodiment shown in figures 11 to 14 almost corresponds to the first embodiment. Therefore the same components are identified by the same reference numerals. With the exception that, in this embodiment, a second follower 47, supported in the lock bottom 3 and the lock cover 22, is used instead of the profile closing cylinder 45. Such lock 1' can be used for example for washroom doors. The second follower 47 is equipped with a closing bit 48, having a function similar to the closing bit 46 of the profile closing cylinder 45 and being assigned to two lock casing-sided stopping shoulders 56, 57. The second follower 47 of this lock 1' is preferably equipped with a turning knob on the door inside. Consequently, the catch bolt 9 can be retracted by means of the lever handle follower 21, like in the first embodiment, compare with figure 12. Furthermore, the catch bolt 9 can be moved forward into the locking position by means of a door-



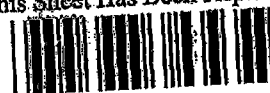
sided turning knob assigned to the second follower 47, whereby the closing bit 48 interacts with the dead locking lever 24 as well as with the catch bolt tail 8. The position according to figure 13 is thus achieved. Opening a door equipped with the lock 1' first requires the retraction of catch bolt 9 by means of the second follower 47. Thereupon it is possible to completely retract the catch bolt 9 by means of the lever handle follower 21.

In case a door lever handle 44 is assigned to the lever handle follower 21, the pin 37 takes the position according to the figures 11 to 13. The spring 35 then acts with higher resistance upon the lever handle follower 21. When using a turning knob for the lever handle follower 21, the pin 37 must be placed into the position according to figure 14.

A lock 1" according to a further embodiment illustrated by the figures 15 to 17 is equipped with a catch bolt 9' behaving exclusively like a latch bolt. The catch bolt tail 8 exclusively builds one fork leg 8", upon which also acts a tension spring 13'. There is no dead locking device provided in this embodiment of lock 1". Furthermore, there is no lever handle follower 21 placed in the rear part of the lock casing 2.

The backward movement of the catch bolt 9' is realised by means of a follower 49 acting upon the center area of the fork leg 8", which follower's arm 50 interacts with a tenon projection 51 of the catch bolt tail 8, said tenon projection 51 is guided in a longitudinal slot 52 of the partially illustrated lock cover 22'. On the opposite side of the arm 50, the lever handle follower 49 is provided with a second arm 53, upon which acts the

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spring 35 counter-clockwise loading the follower 49. Together with the interaction of the two counter shoulders 54, 54' of the follower 49, the two lock bottom-sided stopping shoulders 55, 55' limit the rotation of the follower 49. The casing-sided spring contact point P is designed the same way as in both
5 aforementioned embodiments. Except that the orientation of the longitudinal slot 38 has changed. It is now oriented in the direction of an arm 53.

According to the figures 15 and 16, the spring contact point P
10 stretches out in the enlarged section of the slot section 42. This means, the spring 35 acts with higher resistance upon the follower 49. Therefore the latter is preferably equipped with a lever handle 44. Urged by actuation of the lever handle, the follower 49 can be brought into the position according to figure
15 16, whereby its arm 50 retracts the catch bolt 9' by means of the tenon projection 51.

In case a not-shown turning knob is to be assigned to the follower 49, the spring contact point has to be displaced, such that the pin engages into the slot section 41, after preceding
20 90° rotation

Yet another embodiment, illustrated in the figures 18 to 20 of a lock 1'', takes advantage of a lever handle follower 21, like in the first two embodiments. Furthermore a catch bolt 9' is utilised like in the third embodiment, but with the exception that
25 there is no follower 49. Like in the first two embodiments, only the catch bolt 9' can be moved backward by means of the lever handle follower 21. According to figures 18 and 19, the spring 35 is set to a higher resistance. Accordingly the door lever



handle 44 is assigned to the lever handle follower 21. In case
a turning knob is installed to the lever handle follower 21, the
casing-sided spring contact point P, can be set to a position
closer to the arm 20, this has been already described in detail
5 for the first embodiment.

Yet another embodiment could almost largely correspond to
the first embodiment. Instead of the profile closing cylinder 45,
a keyhole for a closing bit would be provided in the lock bottom
3 and in the lock cover, by which means the lock equipped with
10 a dead locking device can be locked and unlocked.

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References:

	1	Lock
	1'	Lock
	1"	Lock
5	1'''	Lock
	2	Lock casing
	3	Lock bottom
	4	Longitudinal lateral wall
	5	Longitudinal lateral wall
10	6	Back wall
	7	Front wall
	8	Catch bolt tail
	8'	Fork leg
	8"	Fork leg
15	9	Catch bolt
	9'	Catch bolt
	9"	Catch bolt
	10	Catch bolt head
	10'	Latch ramp
20	11	Aperture
	12	Tenon
	13	Tension spring
	13'	Tension spring
	14	Stay tenon
25	15	Closing contact aperture
	16	Turn pin
	17	Longitudinal slot
	18	Guiding tenon
	19	Cam projection
30	20	Arm
	20'	Nose
	21	Lever follower
	22	Lock cover
	22'	Lock cover
35	23	Sliding surface
	24	Dead locking lever
	25	Turn aperture

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	26	Turn aperture
	27	Center web
	28	Thickening
	29	Stay tenon
5	30	Angled portion
	31	Projection
	32	Pressure spring
	33	Fork sparing
	33'	Fork leg
10	33"	Fork leg
	34	Stop tenon
	35	Spring
	36	Tenon projection
	37	Pin
15	37'	Contact opening for tools
	38	Longitudinal slot
	39	Flattening
	40	Slot wall
	41	Slot section
20	42	Slot section
	43	Support surface
	44	Door lever handle
	45	Profile closing cylinder
	46	Closing bit
25	47	Follower
	48	Closing bit
	49	Follower
	50	Arm
	51	Tenon projection
30	52	Longitudinal slot
	53	Arm
	54	Counter shoulder
	54'	Counter shoulder
	55	Stopping shoulder
35	55'	Stopping shoulder
	56	Stopping shoulder
	57	Stopping shoulder
	P	Spring contact point

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**Claims**

1. Lock with a catch bolt (9, 9', 9") protruding out from a lock casing (2), which catch bolt's tail (8), displaceably guided inside the lock casing (2), can be retracted through the contact of an arm (20) of a spring-cushioned lever handle follower (21) and upon preceding lifting of a dead locking device, can be moved forward into locking action or moved backward urged by the locking actuation by means of a key, a closing cylinder (45), a second follower (47, 49) or the like, characterised in that a dead locking device, liftable by a closing bit (46, 48), is designed as one-armed dead locking lever (24) building turn apertures (25, 26) into which engages a catch bolt tail-sided turn pin (16) and which is supported about a casing-sided stay tenon (29) arranged above a catch bolt head (10).
2. Lock according to claim 1, characterised in that the turn apertures (25, 26) are positioned at the free end of the dead locking lever (24) and a closing bit contact point (28) approximately in its center.
3. Lock according to one or several of the preceding claims, characterised in that the dead locking lever (24) is spring-cushioned with regard to a lateral casing wall (4).
4. Lock according to one or several of the preceding claims, characterised in that the catch bolt tail (8)



- 5 presents a solidly thereto connected cam projection (19), upon which acts an arm (20) of the lever handle follower (21) and which is moved out of the swivelling range, when the catch bolt (9) is moved forward into the locking position.
5. Lock according to claim 4, characterised in that the cam projection (19) presents a bevelled sliding surface (23) formed for the contact of a nose (20') of the arm (20).
- 10 6. Lock according to one or several of the preceding claims, characterised in that the arm (20) of the lever handle follower (21) is maintained by a spring (35) in an orientation parallel to the catch bolt's displacement direction.
- 15 7. Lock with a catch bolt (9, 9') protruding out from the lock casing (2), which catch bolt's tail (8), displaceably guided in the lock casing (2), can be retracted by means of the contact of an arm (20) of a spring-cushioned lever handle follower (21),
- 20 characterised in that the spring resistance of the spring (35) cushioning the lever handle follower (21, 49) is adjustable.
8. Lock according to claim 7, characterised in that a spring contact point (P), fixed to the casing, is
- 25 displaceable.



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9. Lock according to one or several of the preceding claims, characterised in that the spring (35) is a tension spring acting upon the arm (20, 53).
10. Lock according to one or several of the preceding claims, characterised in that the spring contact point (P), fixed to the casing, is built by a pin (37) displaceable in the lock casing (2).
11. Lock according to one or several of the preceding claims, characterised in that the pin (37) is displaceable between two positions in a longitudinal slot (38).
12. Lock according to one or several of the preceding claims, characterised in that the pin (37) is hold in one of its two end positions by means of a bayonet-type fastening.
13. Lock according to one or several of the preceding claims, characterised in that the pin (37) on its end sides presents flattenings (39) respectively on opposite sides, which in the one position, in the slot sections (41) of the slots (38) in the lock cover (22, 22') and in the lock bottom (3), are parallel to the slot walls (40), and in the other position they are arranged in a section enlarged slot section (42) transversely with regard to the slot walls (40).
14. Lock according to one or several of the preceding claims, characterised in that the enlarged slot



section (42) builds support surfaces (43) for a plane location of the border areas of the flattenings (39).

- 5 15. Lock according to one or several of the preceding claims, characterised in that the catch bolt tail (8) can be additionally moved forward into the locking position and moved backward by means of a closing bit actuation, after preceding displacement of the dead locking device (dead locking lever (24)).
- 10
16. Lock according to one or several of the preceding claims, characterised in that the catch bolt tail (8) is guided close between both lateral lock walls (4, 5) and is spring-cushioned in locking direction by a tension spring (13, 13').
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17. Lock according to one or several of the preceding claims, characterised in that the lever handle follower (21) is provided with a fork sparing (33) defining a clearance and therewith embracing a lock casing-sided stop tenon (34).
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