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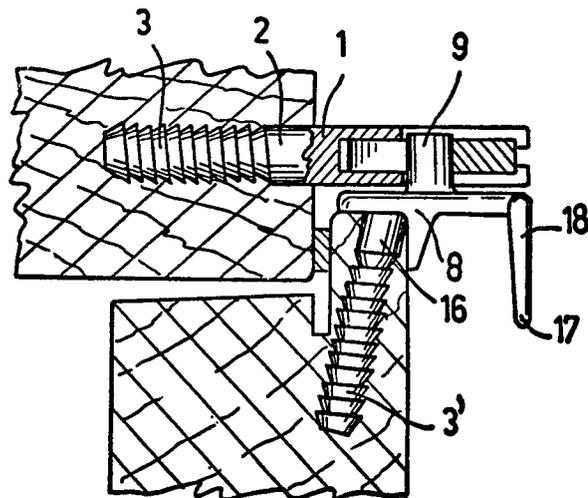
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⑤4 **Window lock.**

⑤7 This invention relates to a window lock consisting of the bolt part (8) attached to the sash and the locking part (1) attached to the window frame. The locking part (1) includes a groove (14) and a rotatory tightening organ (11) with the opening (7) by means of which the bolt (9) of the bolt part (8) is tightened towards the end of the groove (14). Thus a very firm closing between the sash and the window frame is accomplished.



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Window lock

This invention relates to a window lock more closely defined in the introduction to claim 1.

The constructions of the known locks for windows are such that the closing movement caused by the lock itself is so short that the sealing is not pressed enough. The result of this short movement is the fact that the tightness between the sashes and window frames is not accomplished.

The known inlaid lock models have also the disadvantage that they function as the cold conductors from the space between the window glasses into the room. Furthermore the user of the inlaid lock cannot know whether the lock is at its shut position or at its open position when the window is closed.

The purpose of the present invention is to bring about a novel construction of the window lock, which removes the disadvantages of the conventional constructions. This is achieved by means of the lock characterized more closely in the characteristic parts of the annexed claims.

By means of the window lock according to this invention the length of the closing movement of the lock when closing the window becomes long enough so that all the known types of the elastic sealings can wholly in all their parts be pressed hermetically between the sashes and the window frames so that they can endure the pressure caused by the wind.

The groove of the locking part supports the lock side both during the closing of the window and when it is shut. This fact means that the load of the hinges is diminished and the sashes and the window frames are parallel.

The locking parts and the bolt parts of the window lock have both advantageously cylindrical brackets, which are threaded in order to attach the said parts firmly to the sashes and the window frames. The dimensions of the said brackets are such that they do not go through the sashes and correspondingly through the window frames. Thus the cold conduction effect is avoided. The size and the direction of the said bracket can advantageously be

made so that they fit to the bores ment for the pin hinges.

One advantageous embodiment of the invention is made better perceptible in the following description with simultaneous references to the enclosed drawings in which

- 5 fig. 1 shows the window lock according to the invention in a side view,
- fig. 2 shows the lock according to fig. 1 in a sectional view,
- fig. 3 shows the lock in a top view,
- fig. 4 shows the lock along the line A-A in fig. 2,
- 10 fig. 5 shows the locking part and the bolt part of the lock separately in a side view.

The frame 1 of the locking part is attached to the window frame by means of the thread 3 of the bracket 2. The thread 3 makes the attachment of the frame 1 firm. Correspondingly the
15 bolt part 8 of the lock is attached to the sash of the window by means of the thread 3' of the bracket 16. The bolt part 8 has a tap-formed bolt 9 and the handle part 17, by means of which the window is opened and shut. The handle part 17 can be advantageously have the form of plane 18 so that this plane can function as a
20 middle part when the windows are piled one on top of another.

The open groove 14 has been formed to the frame 1 of the locking part so that this groove 14 is at the direction of the movement of the bolt 9, which slides along the sides 13 of the groove 14 simultaneously supporting the window frame at this side of the
25 window. When the lock is locked up the bolt is still against the surface 13 and thus prevents the downward movement of the window in that case that the hinges yield. The tightening organ 11 is fitted to the frame 1 by means of the round bearing surface 6. This organ 11 can be turned according to the arrows 4 by means of
30 lever 5. The tightening organ 11 has an opening 7, which is parallel to the groove 14 of the frame 1 when the tightening organ is at its open position (fig. 5 left). The opening 7 is arranged to reach to the centre of the tightening organ 11. Thus the bolt 9 can go into the groove 14 and into the opening 7 when closing
35 the window. The opening 7 has with regard to the rotation of the tightening organ eccentricly formed side surface 10, which during the rotation of the tightening organ 11 by means of the lever 5,

presses the sash by means of the bolt 9 against the window frame in the direction of the arrow 15 in the fig. 2. The position of the lever 5 shows immediately whether the lock is open or shut.

C L A I M S

1. Window lock including the bolt part (8,9) attached to the surface of the sash and the locking part (1) attached to the window frame or the like, which locking part has tightening organ (11) revolvingly fastened to the locking part with bearings, 5 where at the tightening organ has the opening (7) in the lateral direction of the tightening organ (11) so that the locking part can take the bolt when the tightening organ is at its open position, whereat the side surface (10) of the opening (7) is formed eccentric with regard to the rotation of the tightening 10 organ so that it tightens the sash by means of the bolt (9) against the window frame or the like when the organ is rotated from the open position to the shut position, characterized in, that the opening (7) is arranged to reach to the center of the tightening organ (11).

15 2. Window lock according to the claim 1, characterized in, that the tightening organ (11) has the shape of the round discus which is revolvingly fastened with bearings into the space (6) of the frame (1) of the lock, which space (6) has the corresponding shape between the two walls, whereat the discus includes 20 lever (5) for operation which lever simultaneously shows the open and shut positions of the lock.

3. Window lock according to the claim 2, characterized in, that the opening or the groove (14) is formed to the wall of the frame (1) of the lock so that the side surfaces (13) of the said 25 groove are parallel with the opening movement of the window thus steering and supporting the bolt (9) during the opening and closing movement of the window.

4. Window lock according to any of claims 1-3, characterized in, that cylindrical brackets (2,16) have been arranged to the 30 bolt part (8) and the locking part (1), which brackets fit to the bores and the surface (3) of which is threaded in order to accomplish a firm attachment.

5. Window lock according to the claim 1, characterized in, that the handle part (17) is arranged to the bolt part (8) and 35 that the plate (18) parallel to the plane of the window is arranged to the handle part.

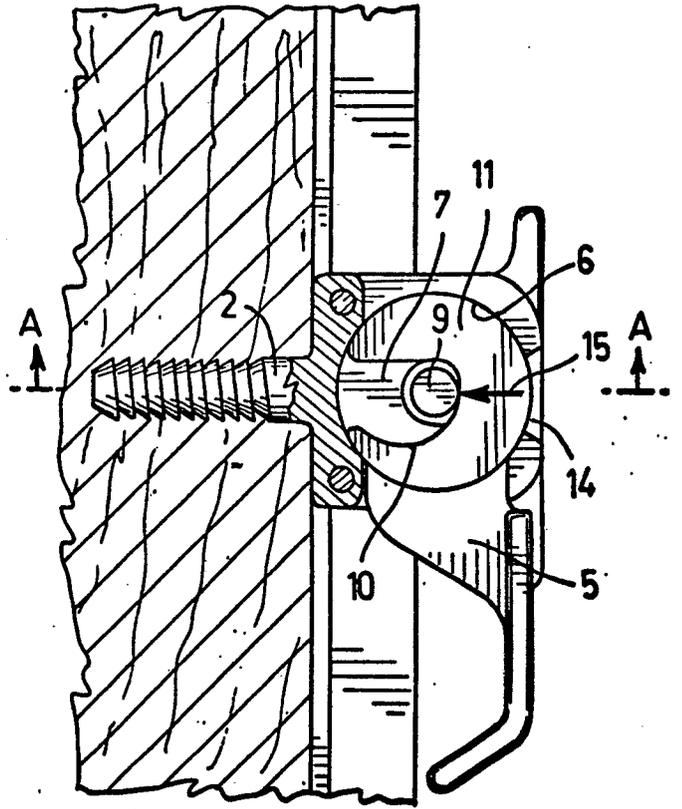
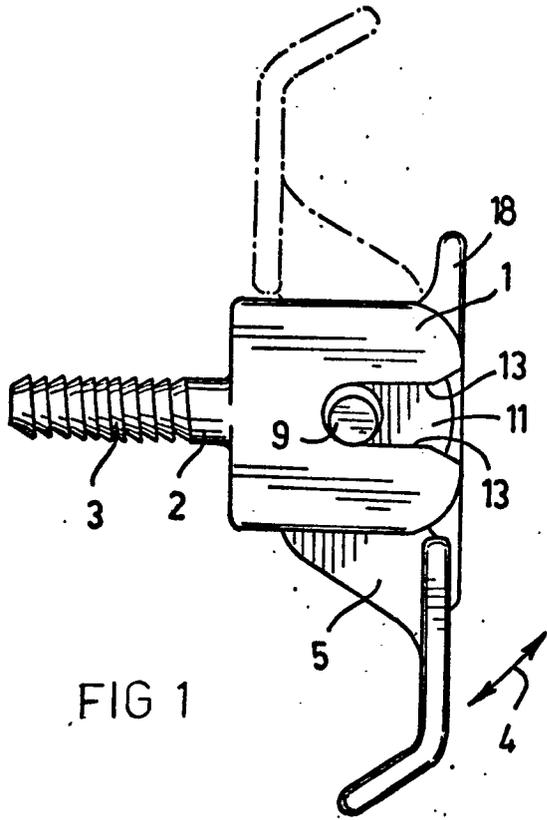


FIG 2

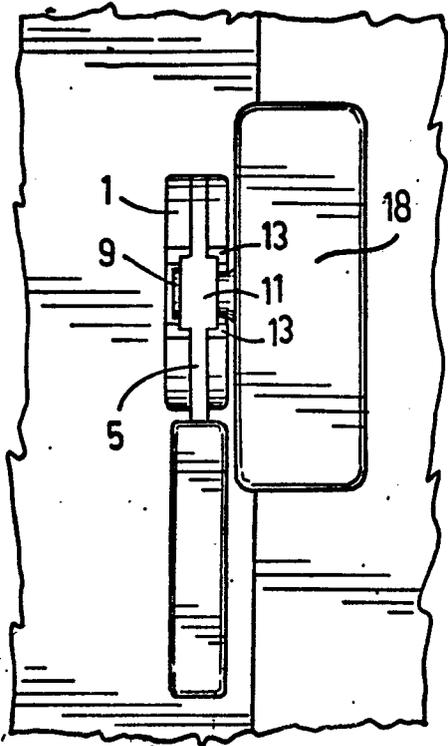


FIG 3

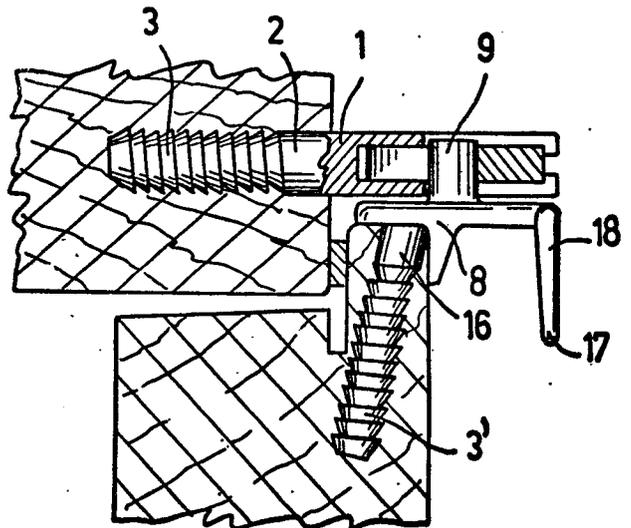


FIG 4

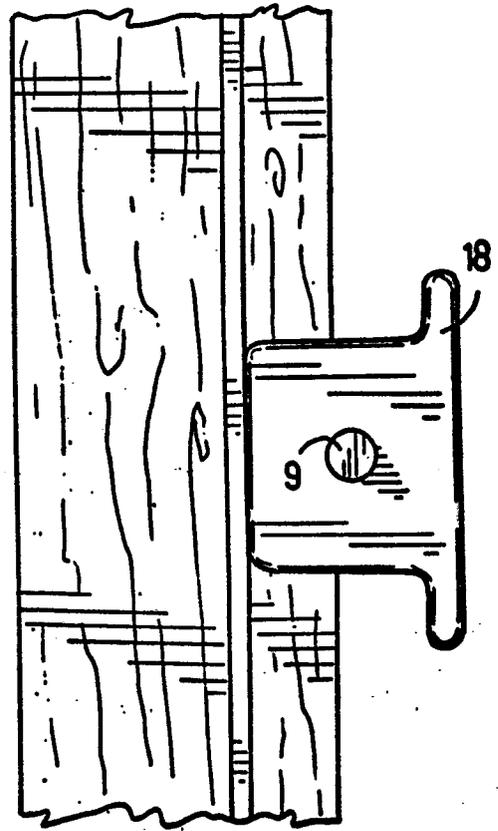
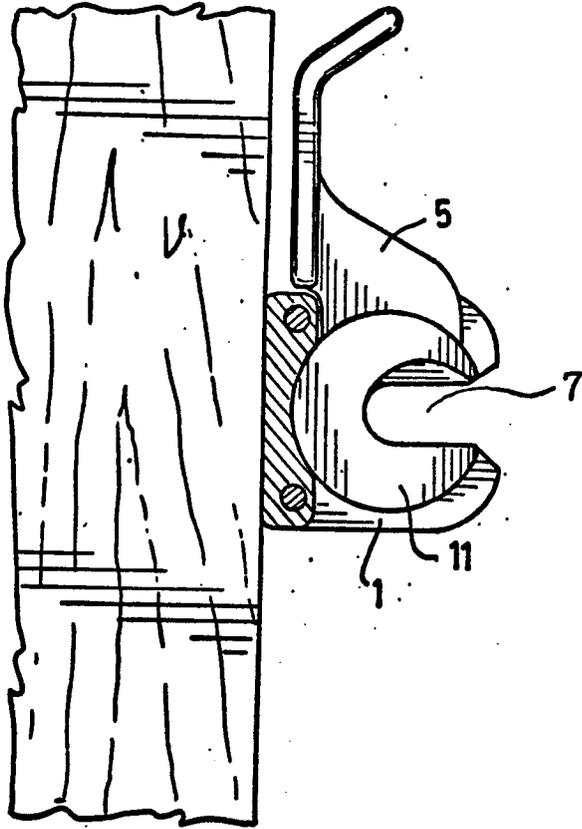


FIG 5



DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int. Cl.)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	DE - U - 1 897 809 (SIEMENS & HALSKE AG) * claims 1, 2; fig. 1 *	1,2,3	E 05 C 3/04 E 05 C 19/12
A	GB - A - 1 357 102 (AB SAMAKO-PRODUKTER) * page 1, line 62 to page 2, line 28; fig. 1 to 4 *	1,2,4	
A	DE - U - 1 783 394 (W. LIEBOLD KG) * page 2, lines 13 to 20; fig. 1 to 5 *	1,2,4	TECHNICAL FIELDS SEARCHED (Int. Cl.)
A	FR - A - 1 305 160 (ETAT FRANCAIS) * page 1, column 2, lines 1 to 7; fig. 1 *	1,2	E 05 C 3/00 E 05 C 19/00
A	DE - U - 1 864 645 (O. STERKEL) * claim 1; fig. 1 *	1,2	
A	FR - A - 2 159 551 (A. DUBOIS & CIE) * page 1, line 37 to page 2, line 6, page 3, line 39 to page 4, line 10; fig. 1 *	1,3	CATEGORY OF CITED DOCUMENTS
A	US - A - 4 014 572 (J.W. BINNS) * column 2, lines 28 to 50; fig. 1 *	1	X: particularly relevant A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: conflicting application D: document cited in the application L: citation for other reasons
<input checked="" type="checkbox"/> The present search report has been drawn up for all claims			&: member of the same patent family, corresponding document
Place of search Berlin		Date of completion of the search 11-02-1980	Examiner WUNDERLICH