Oct. 6, 1964 A. W. AHLGREN 3,151,901

SASH LOCK

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Fig. 1

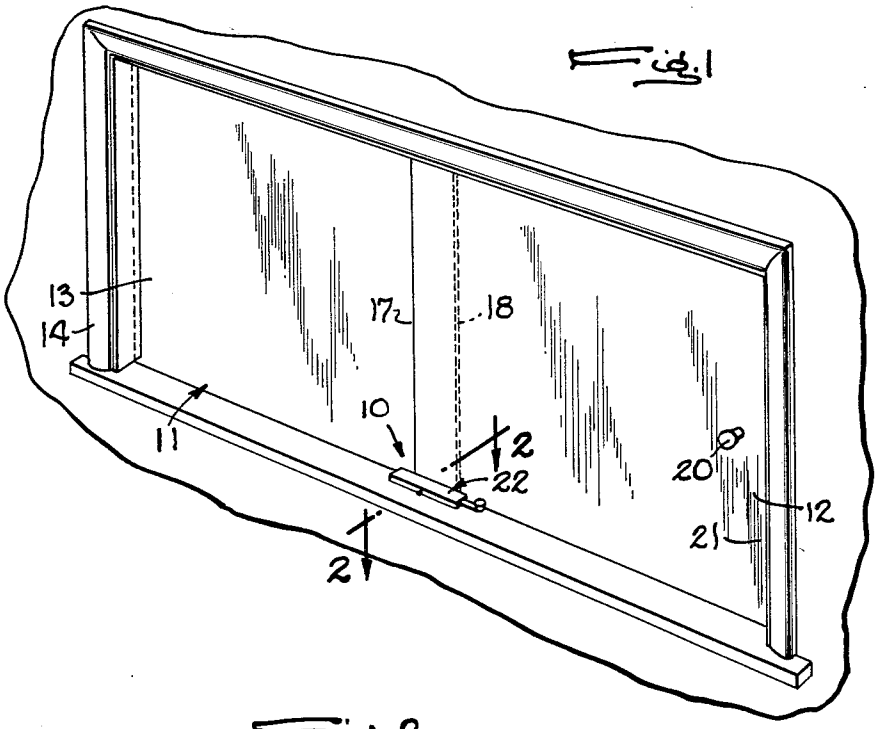
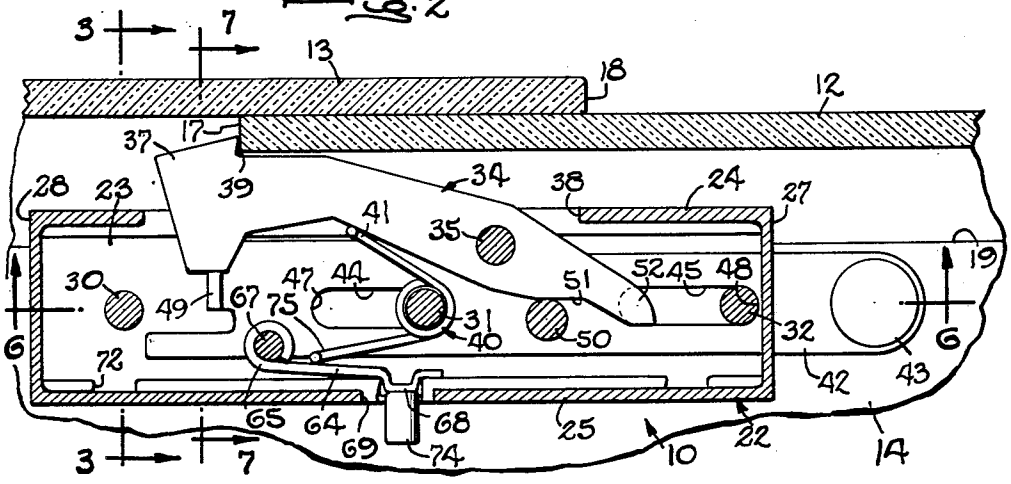


Fig. 2



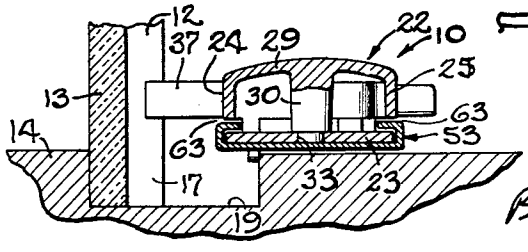


Fig. 3

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Fig. 4

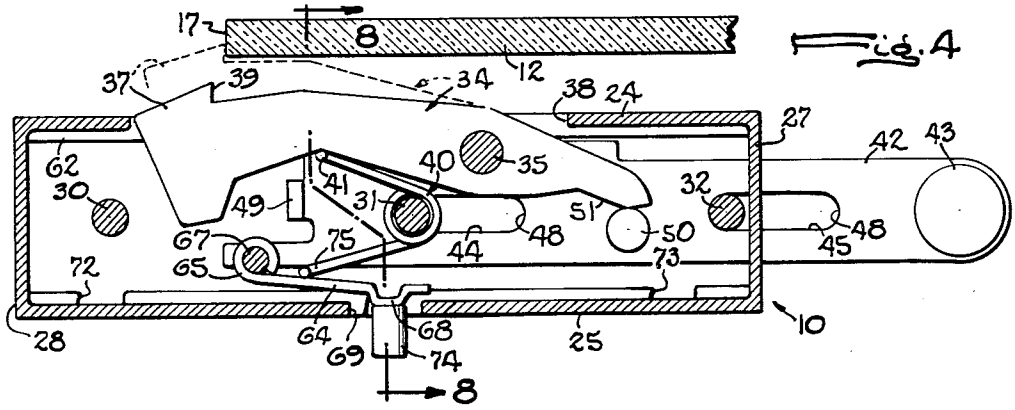


Fig. 5

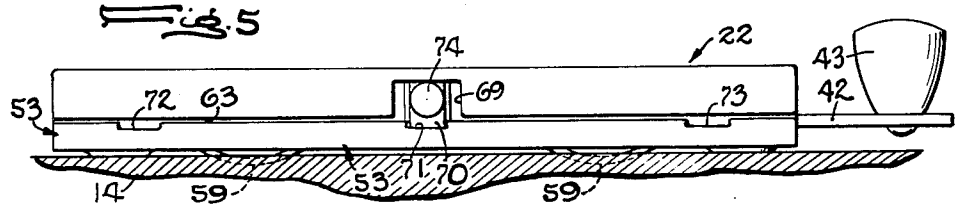


Fig. 6

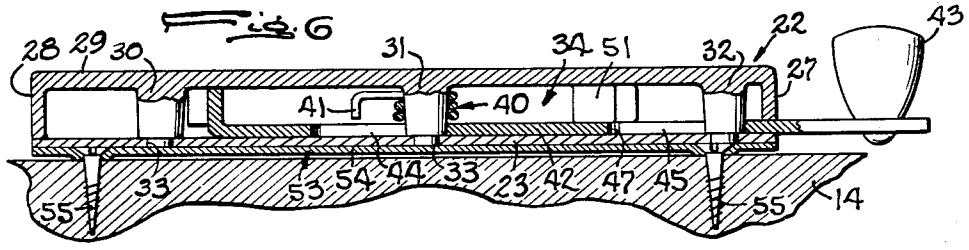


Fig. 7

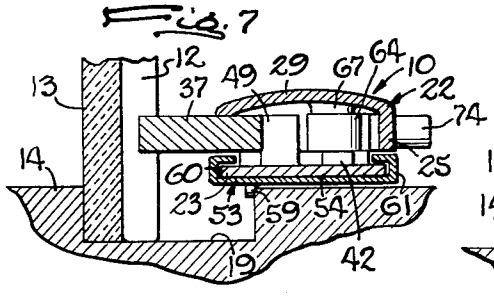
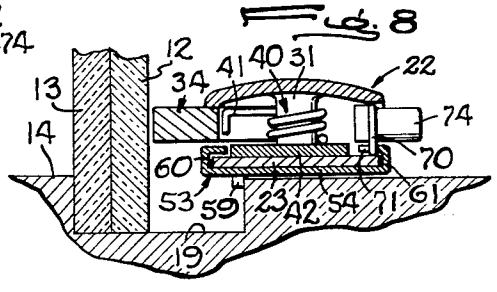


Fig. 8



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Fig. 9

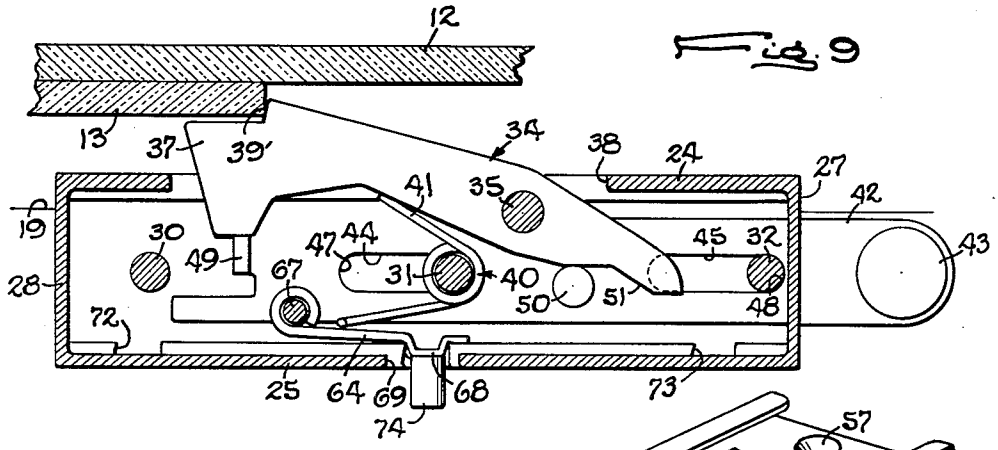


Fig. 10

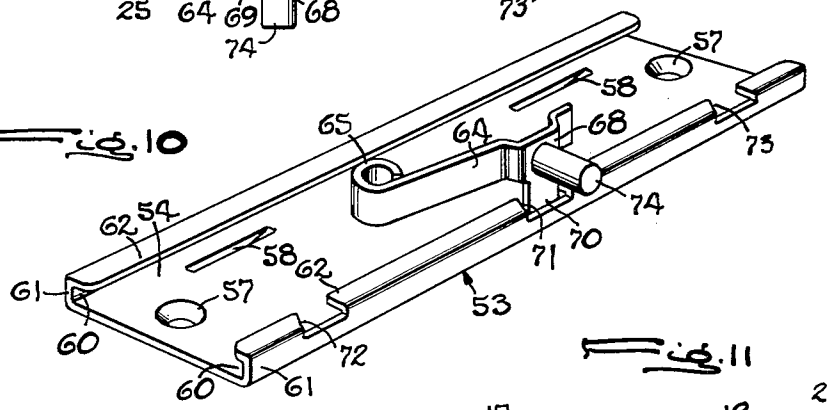


Fig. 11

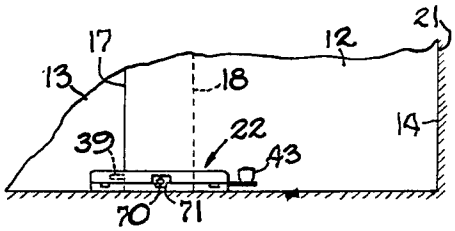


Fig. 12

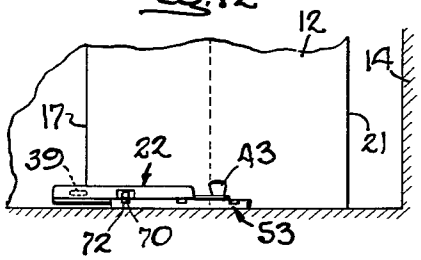


Fig. 13

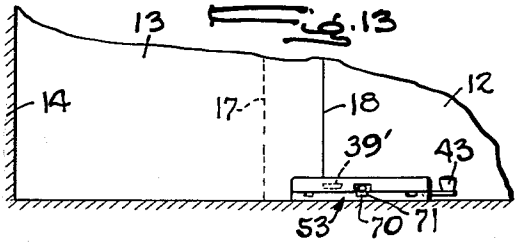
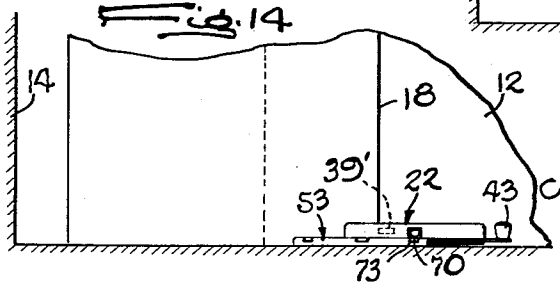


Fig. 14



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SASH LOCK

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Filed Mar. 16, 1961, Ser. No. 96,116
4 Claims. (Cl. 292—124)

The invention relates to locks for securing a panel of a window in a fixed position and, more particularly, to locks for use on sashless windows of the type having a panel slidable back and forth in a frame between an open position and a closed position.

The primary object of the present invention is to provide a novel lock of the above character which is operable to latch the sliding panel in one or more partially open, ventilating positions as well as in the closed position.

A more specific object is to provide in a lock of the above character a novel mounting whereby the lock is adjustable selectively between different positions along the frame to vary the positions in which the panel is latched.

Other objects and advantages will become apparent from the following detailed description taken in connection with the accompanying drawings, in which

FIGURE 1 is a perspective view of a window secured in the closed position by a lock embodying the present invention.

FIG. 2 is an enlarged fragmentary sectional view taken along the line 2—2 in FIG. 1.

FIG. 3 is a fragmentary sectional view taken along the line 3—3 in FIG. 2.

FIG. 4 is a view similar to FIG. 2 but showing a different position of the parts.

FIG. 5 is a side elevational view on an enlarged scale of the lock shown in FIG. 1.

FIG. 6 is a fragmentary sectional view taken along the line 6—6 in FIG. 2.

FIG. 7 is a fragmentary sectional view taken along the line 7—7 in FIG. 2.

FIG. 8 is a fragmentary sectional view taken along the line 8—8 in FIG. 4.

FIG. 9 is a view similar to FIG. 2 but showing a modified form of the lock.

FIG. 10 is a perspective view of the base for mounting the lock on the frame.

FIG. 11 is a fragmentary elevational view of the window shown in FIG. 1 locked in closed position.

FIG. 12 is a view similar to FIG. 11 but showing the window locked in the partially open position.

FIG. 13 is a fragmentary elevational view similar to FIG. 11 but showing a window in which the left panel slides and is locked in closed position by the modified lock.

FIG. 14 is a view similar to FIG. 13 but showing the window locked in the partially open position.

For purposes of illustration, the invention is shown in the drawings embodied in a lock 10 for use on a window 11 of the sashless type comprising two rectangular glass panels 12 and 13 mounted directly in a frame 14 with the adjacent edges 17 and 18 of the panels overlapping. At least one of the panels, herein the right panel 12 as viewed in FIG. 1, is slidable back and forth between open and closed positions in tracks formed by a lower horizontal groove 19 in the frame and a similar upper groove (not shown). A knob 20 may be attached to the inside of the panel 12, preferably near an edge 21 opposite the overlapping portion, by means of a screw (not shown) inserted through the glass and threaded into the knob to facilitate sliding of the panel.

The lock 10 is mounted on the frame adjacent the overlapping portions of the panels and enclosed in an

elongated casing 22 comprising a bottom plate 23 and a shallow elongated cover formed by side walls 24 and 25, ends 27 and 28, and a top wall 29. The cover is supported above the bottom plate 23 by shouldered studs 30, 31 and 32 depending from the top 29 and extending into holes 33 (FIG. 6) in the bottom plate. A bolt 34 is supported by the casing 22 for moving into and out of engagement with the sliding panel 12 to effect the latching of the latter. While the bolt 34 may latch the panel against sliding in either direction, as by entering a recess (not shown) formed on the panel, it is shown herein as only preventing sliding of the panel toward the open position. For this purpose, the illustrative bolt comprises an elongated arm generally parallel to the window and fulcrumed in the casing intermediate its ends on a pin 35 extending downwardly into the casing from the top wall 29. Formed on one end of the bolt, the left end as viewed in FIG. 4, is a hook 37 movable out of the casing through an opening 38 in the side wall 24 adjacent the window to carry an abutment 39 on the hook past the edge 17 of the panel and block sliding of the latter toward the open position as shown in FIG. 2. In this instance, the hook 37 is urged out of the casing and into the latching position by a torsion spring 40 coiled around the stud 31 with one end 41 abutting against the bolt between the pivot 35 and the hook.

Locking and unlocking of the window is accomplished in this instance by a manually operable slide 42 comprising an elongated flat plate projecting through the end 27 of the casing with a handle 43 secured to the projecting end to facilitate shifting of the slide back and forth along the bottom 23 of the casing between locking and unlocking positions. The studs 31 and 32 supporting the cover extend through slots 44 and 45 in the slide 42 and abut against the opposite ends 47 and 48 of their respective slots to limit movement of the slide in each direction. When the slide is disposed in the locking position with the studs 31 and 32 against the ends 48 of the slots as shown in FIG. 2, the hook 37 is held by the spring 40 yieldably in the latching position and a tab 49 turned up at the inner end of the slide (see FIG. 7) abuts against the hook end of the bolt, thus locking the hook against moving away from the window. As the slide is pulled outwardly to move the other ends 47 of the slots against the studs 31 and 32 as shown in FIG. 4, a pin 50 carried by the slide rides along a surface 51 on the end 52 of the bolt opposite the hook, the surface 51 being inclined across the path of the pin 50 so that the pin swings the bolt around the pivot and withdraws the hook. When the slide is in the unlocking position, the pin 50 abuts against the end 52 of the bolt and holds the hook end of the latter away from the window.

The present invention contemplates mounting the lock 10 in a novel manner so that the sliding panel 12 may be latched in one or more partially open positions as well as in the closed position. For this purpose, the casing 22 is mounted on a base 53 for sliding back and forth along a path paralleling the window, and means is provided to hold the casing selectively in a plurality of different positions on the base 53 thereby to vary the position in which the panel 12 is latched.

Herein, the base 53 for slidably supporting the casing 22 comprises an elongated plate 54 fast on the frame 14, adjacent the overlapping portions of the panels, by screws 55 driven into the frame through holes 57 (FIG. 10) near each end of the plate 54. In this instance, the side of the base adjacent the window extends over the lower groove 19 and part of the metal of the base is struck out at 58 (FIG. 10) to form lips 59 for abutting against the side of the groove 19 and bracing the lock 10 against moving away from the window. The casing is mounted

on the base in a track comprising channels 60 (see FIG. 10) formed along each side of the base by vertical walls 61 and flanges 62 turned inwardly from the walls 61 to parallel the plate 54 and overlie the bottom 23 of the casing 22. The side walls 24 and 25 of the casing terminate above the bottom 23 to form slots 63 (FIG. 5) extending along the side walls for receiving the flanges 62. Mounted in this manner, the casing is slidable longitudinally on the base and is held by the sides 61 of the base against transverse movement away from the window.

In this instance, the means for locking the casing 10 in different positions on the base 53 comprises a catch operable to lock the casing and the base together and consequently to hold the casing in different fixed positions relative to the frame and the window. As shown in the drawings, the illustrative catch comprises a wing 64 curled at one end to form a loop 65 which is disposed loosely around a pin 67 fixed to the casing. An offset portion 68 near the other end of the wing is disposed in a notch 69 in the side of the casing and carries a detent, in this instance a finger 70 operable to be latched in a series of stops formed by notches 71, 72 and 73 in the flange 62 on the base and thereby lock the casing to the base, for example in the position shown in FIG. 2. One end 75 of the torsion spring 40 abuts against the wing 64 and urges the offset 68 thereof toward the notch 69 in the casing to press the finger into one of the notches in the base. A button 74 suitably secured to the offset 68 projects out of the casing and is operable, when pushed in, to disengage the detent.

With the button 74 pushed in, the casing may be slid back and forth along the base to aline the finger 70 with any desired notch. If it is desired to latch the window in the closed position, the finger is alined with the centrally located notch 71 (see FIG. 11). In this position of the lock, the edge 21 of the panel 12 may be locked tightly against the frame 14. On the other hand, if it is desired to latch the sliding panel in a partially open position permitting ventilation, the casing is shifted to the left to latch the finger in the left notch 72 as shown in FIG. 12. When the lock is in this position, the panel is free to slide partially open. Merely by depressing the button and sliding the casing back to the central position, the lock may be returned to lock the window in closed position.

Shown in FIGS. 9, 13 and 14 is a modification of the lock adapted to latch a window having a sliding panel disposed on the left of the fixed panel. In this case the construction differs only in the configuration of the hook 37, the latter having an abutment 39' operable to block sliding of the panel toward the right. To change the latching position of the modified construction from the closed position (FIG. 13), the casing is slidable to the right until the finger 70 engages the notch 73 adjacent the right end of the base as shown in FIG. 14. Then the panel 13 is blocked against sliding past a partially open position.

From the foregoing it will be apparent that a lock constructed in accordance with the present invention is operable to latch the window in a plurality of predetermined positions. Simply by mounting the bolt on a casing adjustable relative to the sliding panel, the latching position of the bolt is made adjustable selectively between one or more alternative positions along the base, the positions in this instance being determined by notches along the base selectively engageable with a detent on the casing. As a result, the panel may be latched either in closed position or in one or more ventilating positions.

I claim as my invention:

1. For use with a window having a panel mounted in a fame to slide endwise back and forth along a predetermined path and between an open position and a closed position, a lock comprising a base adapted to be mounted on the frame alongside the panel, a pair of channels extending along opposite sides of said base and defining a track paralleling said path, a casing slidable back and forth along said track, a bolt movably mounted in said casing and projecting through one side thereof toward the panel, said bolt being movable relative to the casing into a blocking position in the plane of the panel when the latter is closed thereby to prevent sliding of the panel toward the open position, and being movable out of said plane to permit the panel to slide open, a finger carried by said casing and movable relative thereto toward and away from one of said channels, said one channel being formed with a plurality of notches opening toward said finger and spaced apart along said track, a spring urging said finger toward said one channel and into one of said notches thereby to latch said casing in a predetermined position relative to said track and said path, and selectively operable means accessible from outside said casing for shifting said finger out of said one notch whereby said casing is adjustable along said track to bring said finger into alinement with another notch, such adjustment varying the blocking position of said bolt and thereby varying the position in which the panel is locked.

2. For use with a window having a panel mounted in a frame to slide endwise back and forth along a predetermined path and between an open position and a closed position, a lock comprising a base adapted to be mounted on the frame alongside the panel, means on said base defining a track paralleling said path and extending along a wall of said base, a casing slidable back and forth along said track, a bolt movably mounted on said casing and projecting toward the panel, said bolt being movable relative to the casing toward the panel and into a blocking position in the plane of the panel when the latter is closed thereby to prevent sliding of the panel toward the open position, and being movable out of said plane to permit the panel to slide open, a finger carried by said casing and movable relative thereto toward and away from said wall, said wall being formed with a plurality of notches opening toward said finger and spaced apart along said track, a spring urging said finger toward said wall and into one of said notches thereby to latch said casing in a predetermined position relative to said track and said path, and selectively operable means accessible from outside said casing for shifting said finger out of said one notch whereby said casing is adjustable along said track to bring said finger into alinement with another notch, such adjustment varying the blocking position of said bolt and thereby varying the position in which the panel is locked.

3. A latch as defined in claim 2 in which said finger is mounted on a wing pivoted on said casing and urged toward said wall by said spring.

4. For use with a window having a panel mounted in a frame to slide endwise back and forth along a horizontal path between an open position and a closed position, a lock comprising an elongated base mountable in a horizontal position on the frame alongside said path, means on said base defining a track paralleling said path, said base having an upright side wall paralleling said path and said track, a casing slidable back and forth along said track and said wall and extending above the latter, a bolt movably mounted on said casing and slidable relative thereto toward the panel and into a blocking position in the plane of the panel, a detent carried by said casing and movable thereon toward and away from said wall, the latter being formed with a plurality of recesses opening toward said detent and spaced apart along said track, a spring urging said detent outwardly toward said wall and into an alined notch thereby to latch said casing in a predetermined position along said track and said path, and a member secured to said detent above said wall and extending outwardly over said wall to provide means for moving said detent inwardly out of said alined notch to release said casing for sliding along said base.

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