No. 720,164. PATENTED FEB. 10, 1903.

P. E. LOREE.

REVERSIBLE WINDOW SASH.

APPLICATION FILED MAR. 14, 1902.

NO MODEL.

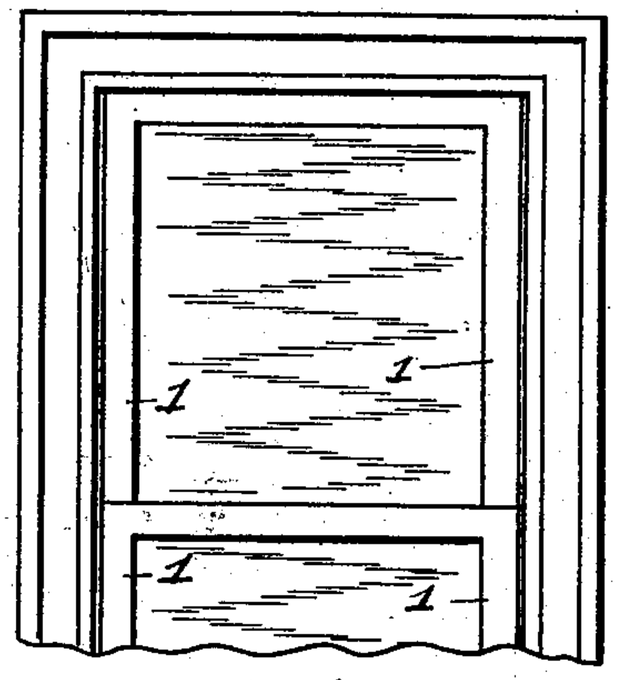

Fig. 1.

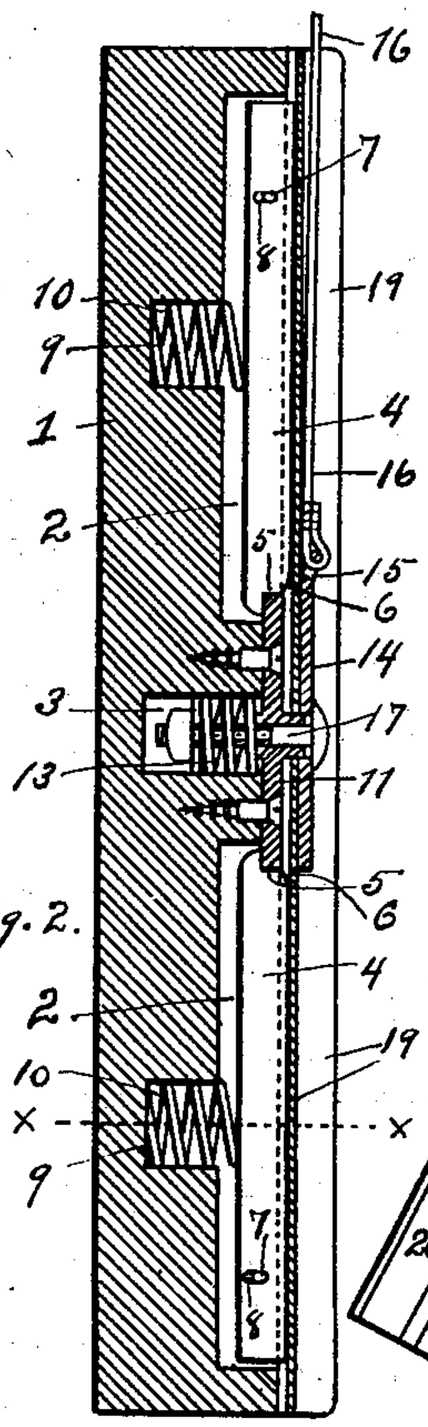

Fig. 2.

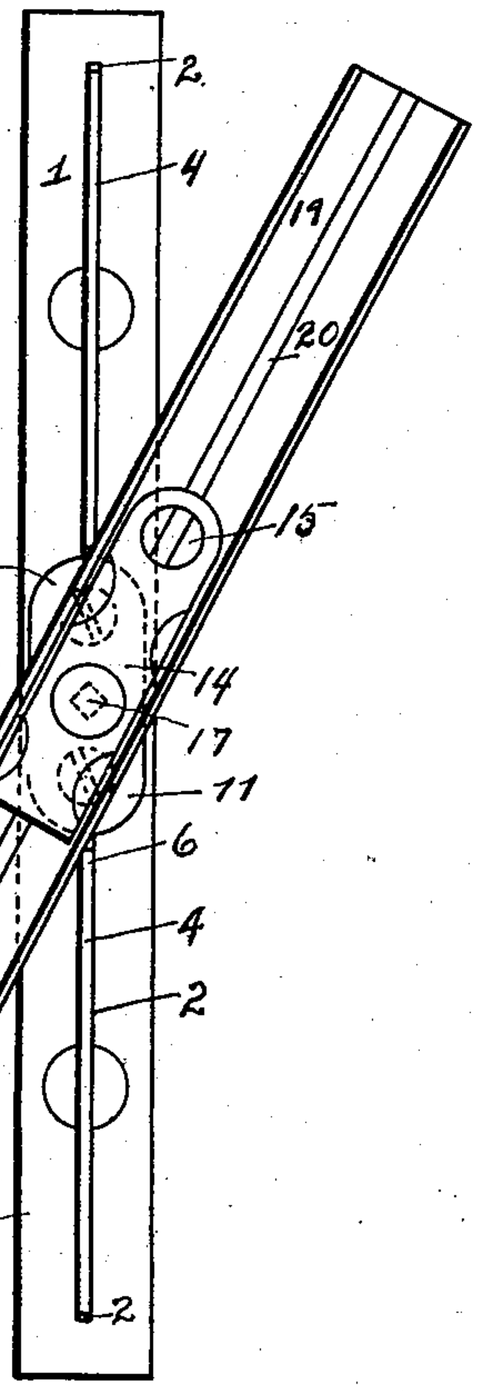

Fig. 3.

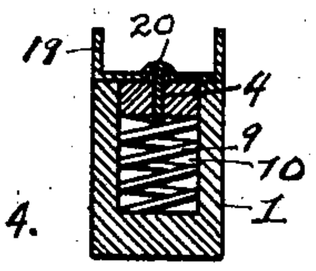

Fig. 4.

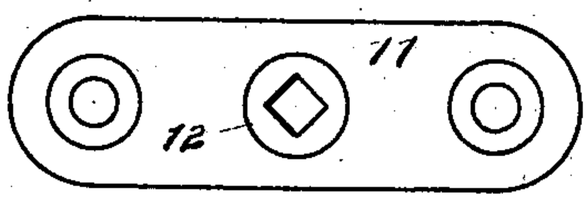

Fig. 9.

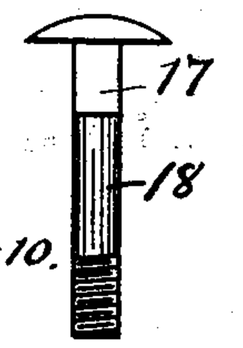

Fig. 10.

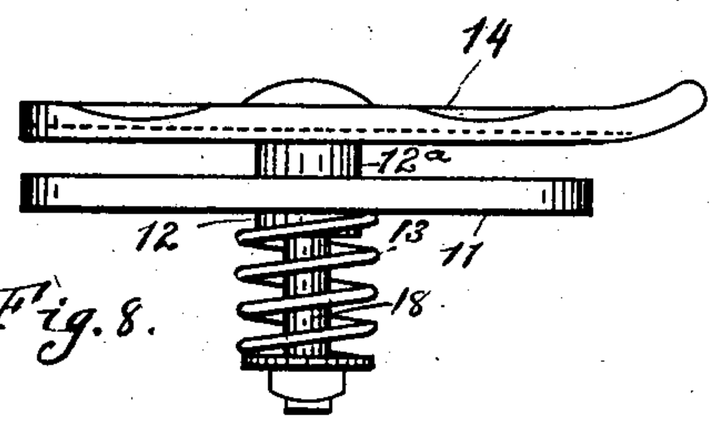

Fig. 8.

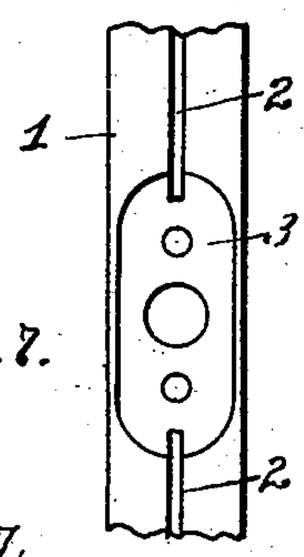

Fig. 7.

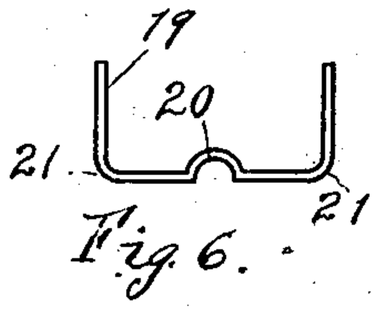

Fig. 6.

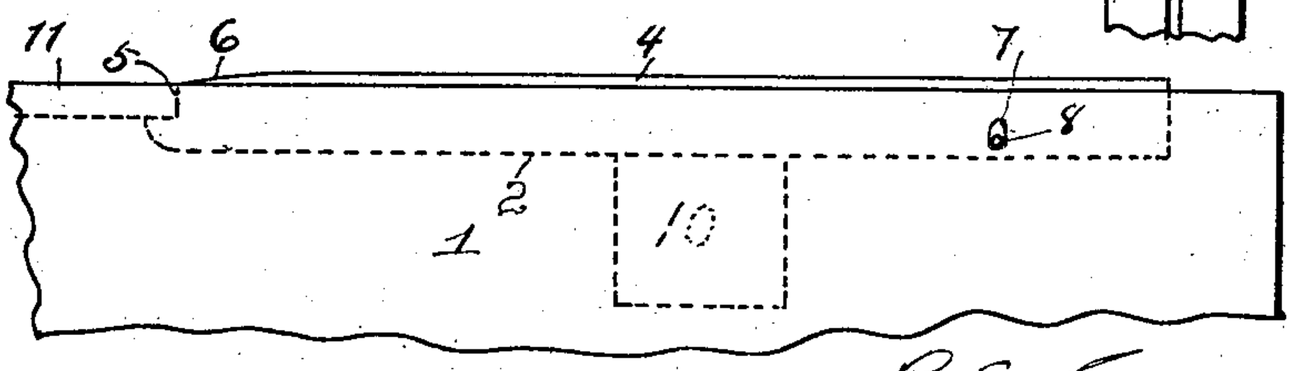

Fig. 5.

WITNESSES
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C. M. Theobald.

P. E. Loree,
INVENTOR
By R. J. McCarty,
his ATTORNEY

UNITED STATES PATENT OFFICE.

PERRY E. LOREE, OF DAYTON, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO INTERNATIONAL MANUFACTURING COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE.

REVERSIBLE WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 720,164, dated February 10, 1903.

Application filed March 14, 1902. Serial No. 98,140. (No model.)

To all whom it may concern:

Be it known that I, PERRY E. LOREE, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Reversible Window-Sashes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in window-sashes, and has for its object the provision of means for manipulating a window-sash to reverse the sides thereof in order that they may be washed or cleansed from the inside, thus avoiding the necessity of a person going upon the outside of a window in order to clean the same.

The invention is an improvement over that shown and described in Letters Patent No. 564,933, granted to myself July 28, 1896.

Preceding a detail description of the invention reference is made to the accompanying drawings, of which—

Figure 1 is a front elevation of a portion of a window frame and sashes upon which my improvements are placed. Fig. 2 is a vertical enlarged section through one side of a window-sash, showing my improvements partly in section. Fig. 3 is a detail side elevation of a window-sash upon which my improvements are placed, one of the metallic channel-bars being moved upon its pivot. Fig. 4 is a sectional view on the line *x x* of Fig. 2. Fig. 5 is an enlarged detail side elevation of a portion of a side of a window-sash, showing one of the locking-tongues in position therein. Fig. 6 is an end view of one of the metallic channel-bars. Fig. 7 is a detail elevation of the outer side of one of the window-sashes. Fig. 8 is an enlarged elevation of the pivot-plates and pivot. Fig. 9 is a detail plan view of one of the pivot-plates. Fig. 10 is a detail of one of the pivot-bolts.

In the specification similar reference characters indicate corresponding parts.

1 designates a vertical side of a window-sash, which, as shown in Figs. 3 and 7, has two vertical longitudinal openings 2 2 cut therein and an intervening recess 3.

4 4 designate two metallic sash-locking tongues which are loosely inclosed within the openings 2 2. These tongues 4 4 have each a notch 5 cut in the inner adjacent ends thereof, and the outer edges of said metallic tongues adjacent to said notches 5 terminate in rounded or tapering form, as at 6, the purpose of which will be hereinafter mentioned. 7 7 designate two transverse oblong openings through said metallic tongues through which pins 8 project, said pins being passed through the side walls of the openings 2 2 and made stationary. These pins 8 limit the movement of said metallic tongues in and out.

9 9 designate two coiled springs which are seated in recesses 10 10 in the window-sash 1. These springs exert an outward pressure upon the metallic tongues 4 4, against which said tongues are placed within the grooves or openings 2 2. The notched ends 5 5 of the metallic tongues 4 4 are held in position on each side of the window-sash by a pivot-plate 11, which is placed in the cavity 3 in said sash. The ends of this pivot-plate 11 project into the notches 5 5 in the ends of the metallic tongues, as shown in Fig. 2, and thereby prevent said ends of said metallic tongues from moving entirely out of their respective openings 2 2. The pivot-plates 11 are secured within the recesses 3 3 by means of screws, and each of the said plates has hubs 12 12^a projecting from opposite sides, one of which projects into a coil-spring 13, and the other of which—to wit 12^a—projects into a metallic plate 14, as shown in Fig. 8, to be again referred to. The latter plate has an opening 15 therein, into which a sash-cord 16 is secured. The pivot-plate 11 has a rectangular opening through which to receive a square portion 17 of the pivot-bolt 18, the said bolt forming the pivot upon which the sashes are moved in angular positions, as shown in Fig. 3, while the bolt is prevented from turning, owing to the square portion 17 being within the rectangular opening in said pivot-plate 11.

19 designates channel-bars, one of which is located on each side of the window-sash within the sash-channel usually provided in window-frames. This channel-bar 19 is preferably made of sheet metal with a central longitudinal groove 20 therein and longitudinal rounded corners 21. These channel-bars are placed in position with the grooves lying adjacent to the side edges of the sash 1, and into these grooves the outer edges of the metallic tongues 4 4 project when the channel-bars are brought in line with said tongues. The metallic plates 14, to which the sash-cords are attached, are secured on the outer sides of these channel-bars 19 and are held stationary with said channel-bars when the sashes are turned upon the pivots 18, thus moving with the channel-bars and the sash.

From the foregoing description it will be seen that the sash is locked in its normal position by the metallic tongues 4 4 entering the channels 20 in the channel-bars 19. From this position the sash may be swung inwardly and outwardly on the pivots 18 by suitable pressure being applied to either end of the sash above or below said pivots. In applying this pressure the tapering edges 6 6 of the metallic tongues 4 4 press inwardly within the slots 2 2 by the edges of said channel 20 making contact therewith, and thus the metallic tongues 4 4 will be moved inwardly within the openings 2 2 throughout their lengths and permit of the window-sash being turned on any desired angle. In bringing the window-sash back to its upright or normal position the rounded edges 21 21 of the channel-bars 19 likewise first make contact with the tapering edges 6 6 of said metallic tongues to move said tongues within the grooves 2 2 until the channels 20 in the channel-bars 19 are brought to a straight position with reference to said tongues 4 4, at which time the pressure of the springs 9 9 throws out said metallic tongues throughout their length into the grooves 20, and whereby the sashes are locked in their normal positions. The tongues 4 4 act as locks for the sash and also serve the useful purpose of weather-strips to exclude air and water from the interior of the window. In this inward movement of the metallic tongues 4 4 in the movement of the window-sash and the outward movement of the metallic tongues under the action of springs 9 9 the pins and slots 7 and 8 control the said metallic tongues and prevent them from moving entirely out of the openings 2 2 when they become entirely released by the sash. The function of the spring 13 is to maintain the outer metallic plate 14 in rigid contact with the outer side of the channel-bar 19 and to hold the sash at any desired position.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a reversible window-sash, the combination with a window-sash the same having longitudinal openings in the outer vertical sides thereof, metallic tongues within said openings, means for maintaining said metallic tongues yieldingly within said openings, a metallic channel-bar having a longitudinal groove therein into which said metallic tongues project, a plate secured to the outer vertical sides of said window-sash, said plate inclosing the adjacent ends of the metallic tongues, a bolt passing through said plate and to which the channel-bars and sash have pivotal connections, substantially as shown and described.

2. In a reversible window-sash, the combination with a window-sash the same having longitudinal openings in the outer vertical sides thereof, metallic tongues placed within said openings, means for yieldingly maintaining said metallic tongues within said openings, a metallic plate secured to the outer vertical sides of said sash between the ends of said metallic tongues and inclosing said ends, a metallic channel-bar having a central longitudinal groove therein into which the said metallic tongues project when the said longitudinal groove is moved in line therewith, a pivot-bolt secured to said metallic plate and forming a pivot for said channel-bar, and a metallic plate also loosely mounted on said pivot-bolt within said channel-bar, said last-named plate providing means for attaching the sash-cord and for maintaining the channel-bar in operative position, substantially as shown and described.

3. In a reversible window-sash, the combination with a window-sash having longitudinal openings in the outer vertical sides thereof, metallic tongues placed within said openings, each of said tongues having a notch and a transverse slot, a pin projecting through said transverse slot and limiting the movement of said tongue, springs exerting outward pressure on said tongues to the inner limit of said slot, a metallic plate secured to said sash between the ends of said tongues, the ends of said metallic plate projecting into the notches in said metallic tongues and thereby maintaining the inner ends of said tongues in position within the openings, a pivot-bolt secured to said metallic plate, a channel-bar having a central longitudinal groove therein into which the said tongues project when the said groove is moved in line therewith, a plate within said channel-bar having a pivotal connection with the pivot-bolt, the said channel-bar and plate being movable with the sash on said pivot and the said plate affording means for attaching the sash-cord and maintaining the channel-bar in position, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

PERRY E. LOREE.

Witnesses:
R. J. McCARTY,
C. M. THEABALD.