J. W. YATES.

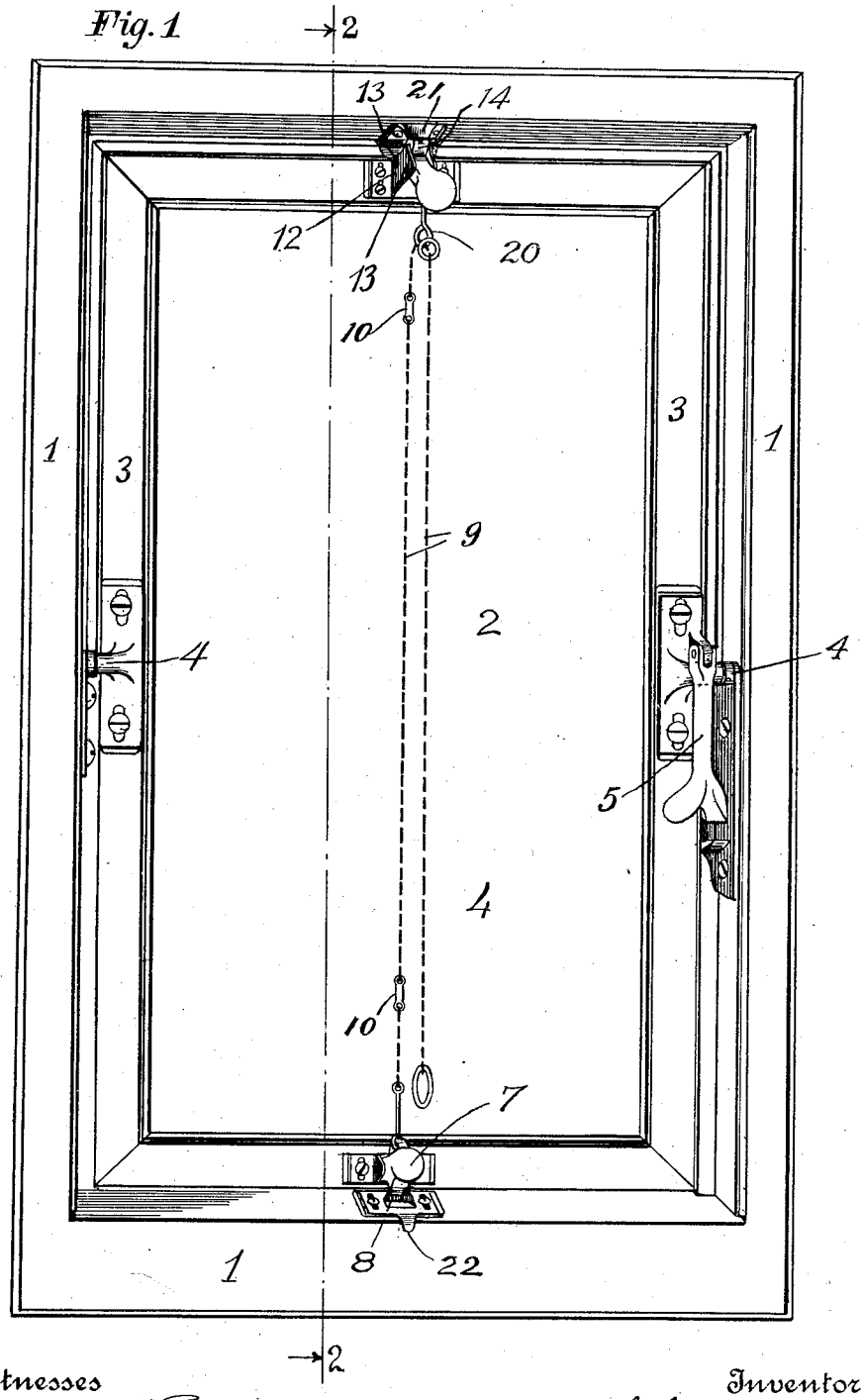
AUTOMATIC LOCKING MECHANISM.

APPLICATION FILED NOV. 25, 1908.

997,532. **Patented July 11, 1911.**

2 SHEETS—SHEET 1.

Fig. 1



Witnesses

Equitable Enright

H. Inockel

Inventor

By his Attorney John W. Yates

George A. Hoffman.

J. W. YATES.

AUTOMATIC LOCKING MECHANISM.

APPLICATION FILED NOV. 25, 1908.

997,532. Patented July 11, 1911.

2 SHEETS—SHEET 2.

Fig. 2

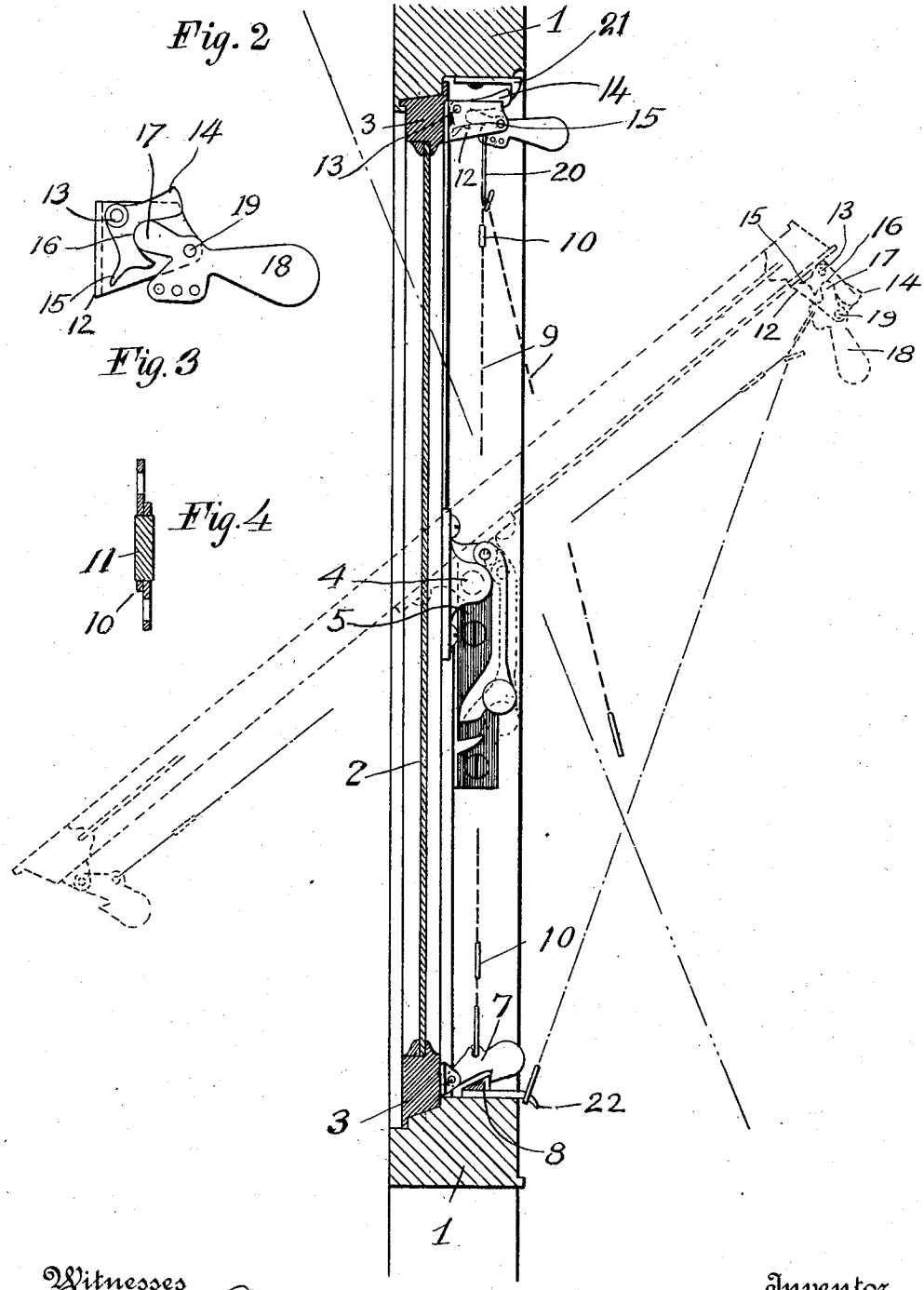


Fig. 3

Fig. 4

Witnesses
Equitable Enright
H. Locke

Inventor
John W. Yates
By his Attorney George A. Hoffman.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN W. YATES, OF NEW YORK, N. Y.

AUTOMATIC LOCKING MECHANISM.

997,532. Specification of Letters Patent. Patented July 11, 1911.

Application filed November 25, 1908. Serial No. 464,444.

To all whom it may concern:

Be it known that I, JOHN W. YATES, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Automatic Locking Mechanism, of which the following is a full, clear, and exact specification.

This invention relates to automatic locking mechanism for pivot hung windows, transoms, or the like, and has particular reference to improvements in upper locking means for windows pivoted horizontally.

The objects of the invention are to provide novel, simple and practical locking means adapted to be manufactured at a low cost and containing certain improvements whereby the same may be easily operated.

To this end, the invention comprises such elements and combinations of parts as is hereinafter described, while reference is had to the accompanying drawings, in which—

Figure 1 is a front elevation slightly in perspective of a centrally pivoted window, provided with upper locking means embodying my invention. Fig. 2 is a sectional view on line 2—2 of Fig. 1. Fig. 3 is a detail view of the locking mechanism, and Fig. 4 is a detail view of a fusible link used in the chain for operating the locking means.

In the drawings, the reference numeral 1 indicates the window frame.

2 is the window having a sash 3 adapted to fit in said frame. The window is pivoted in any suitable manner at 4 and may be provided with any suitable gravity stop mechanism, as indicated generally at 5.

7 represents a lower locking member adapted to coöperate with a fixed catch 8, and 9 is the chain for operating the locking means and which may be provided with fusible links 10, 10, one of which is illustrated in detail in Fig. 4, where 11 represents the fusible metal.

The aforesaid elements may be of any common and well known construction and need not be referred to more in detail.

The upper locking means which constitute the main subject-matter of this invention, comprises supporting means formed by the two brackets 12, 12, carried by the window sash 3. Between the said brackets there is pivoted at 13 a catch lever 14 in the form of a bell crank having an inwardly extending dog 15 and forming a recess 16 for the reception of the inwardly extending nose 17 of a gravity lever 18 pivoted in the free ends of the brackets 12 at 19. The gravity lever is attached to the chain 9, as by a link 20. A fixed stop 21 is secured to the window frame 1 in a position to coöperate with the catch lever 14, as shown in Fig. 2.

In operation it will be seen from Fig. 2 that the gravity lever nose 17 is firmly interlocked with the recess 16 of the catch lever 14 and keeps the same in an upward position locked behind the fixed stop 21. The window is opened by a downward pull on the chain 9 whereby the nose 17 is moved downwardly to free the catch lever 14 from the stop 21, after which the window by a continuous pull on the chain is swung over into the position shown in dotted lines in Fig. 2, where it will be observed that the two levers 14 and 18 are prevented from being disengaged by the inwardly extending dog 15 of the catch lever, contacting with the face of the window frame 3. The window may be kept in open position by attaching the chain 9 to a suitable hook 22. In closing the window the chain is released from the said hook 22 and swung back into vertical position when the catch lever 14 snaps under the stop 21 and automatically locks the window, it being understood that windows of this type are overbalanced, that is, in the present instance the pivot 4 is above the center of gravity, whereby the window automatically seeks the vertical position.

The above is thought to fully explain this invention and the operation thereof. It will be noted that the upper locking means proper comprises but two movable elements, viz., the catch lever and the gravity lever. Further, that by reason of the recess 16 and nose 17 the levers are interlocked while in locked position, and that when the window is opened the dog 15 prevents the catch lever from being pulled down too far by the pull on the gravity lever and thus keeps the members interlocked and ready for the automatic operation at the moment the window assumes the vertical position.

The invention is susceptible of changes in the detail construction thereof, and I do not wish to be limited otherwise than by the intended and legitimate scope of the invention and the claim.

I claim:

In combination with a pivoted window, a

sash lock of the character described, comprising a fixed stop, brackets secured to the frame of the window, a catch lever pivoted at the inner ends of said brackets, a gravity lever pivoted at the outer ends of said brackets and provided with an inwardly extending nose, said catch lever being provided with a recess for the reception of the said gravity lever nose for interlocking said levers to keep the said catch lever in engagement with the said fixed stop when the window is locked, an inwardly extending dog formed integral with the said catch lever and adapted to contact with the said window for keeping the said two levers interlocked when the window is open, and means for actuating said gravity lever to operate the catch-lever to disengage the latter from the said fixed stop.

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

JOHN W. YATES.

Witnesses:
WM. TULLETT,
D. H. MUNROE.