F. BOGENBERGER.

GRAVITY SASH LOCK.

APPLICATION FILED AUG. 24, 1908.

913,096. Patented Feb. 23, 1909.

Fig. 1.

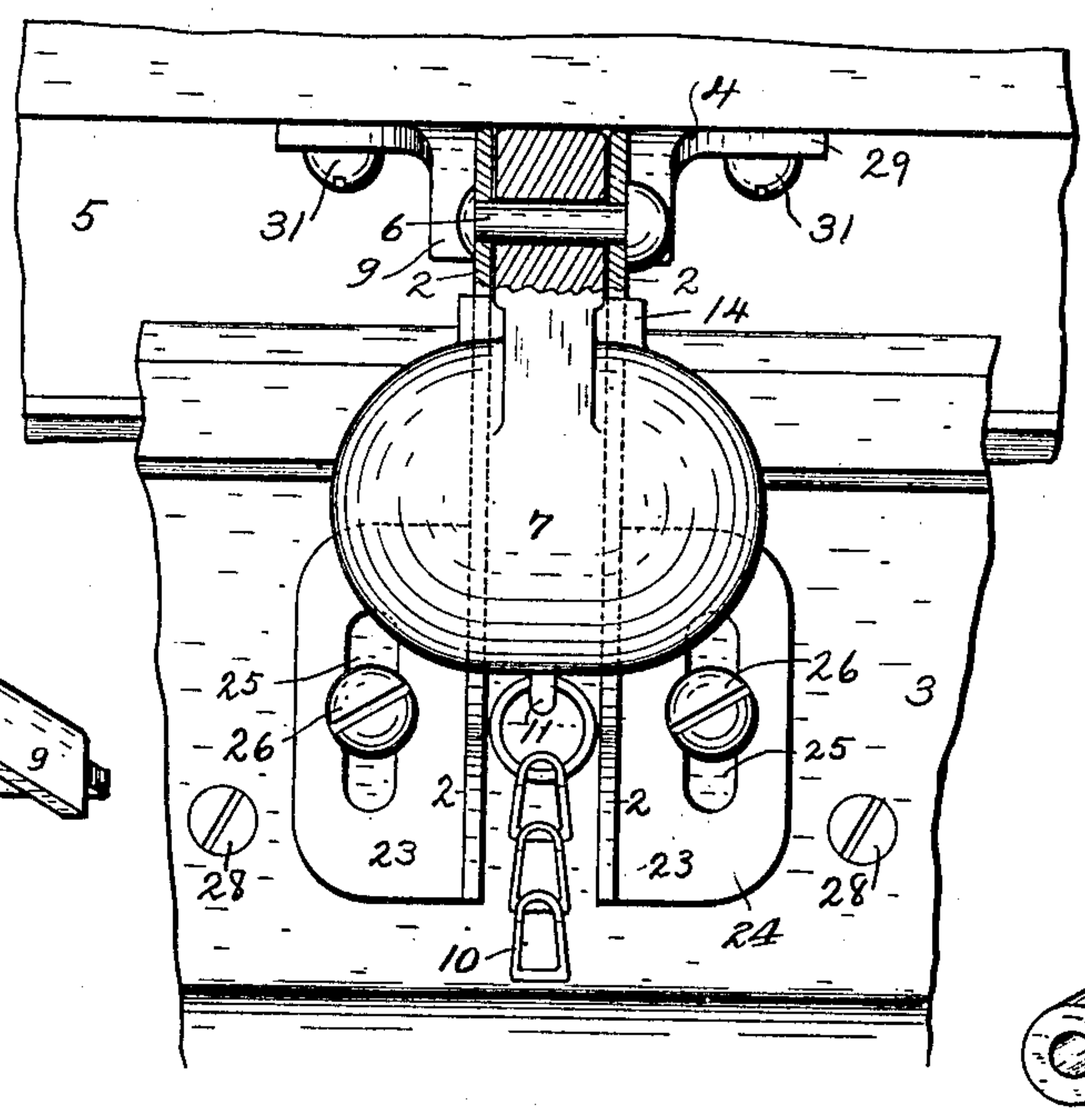


Fig. 3.

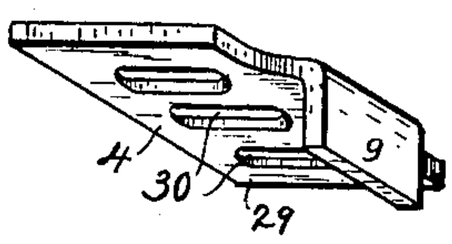


Fig. 5.

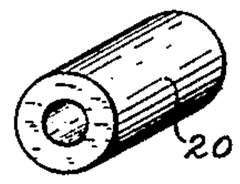


Fig. 2.

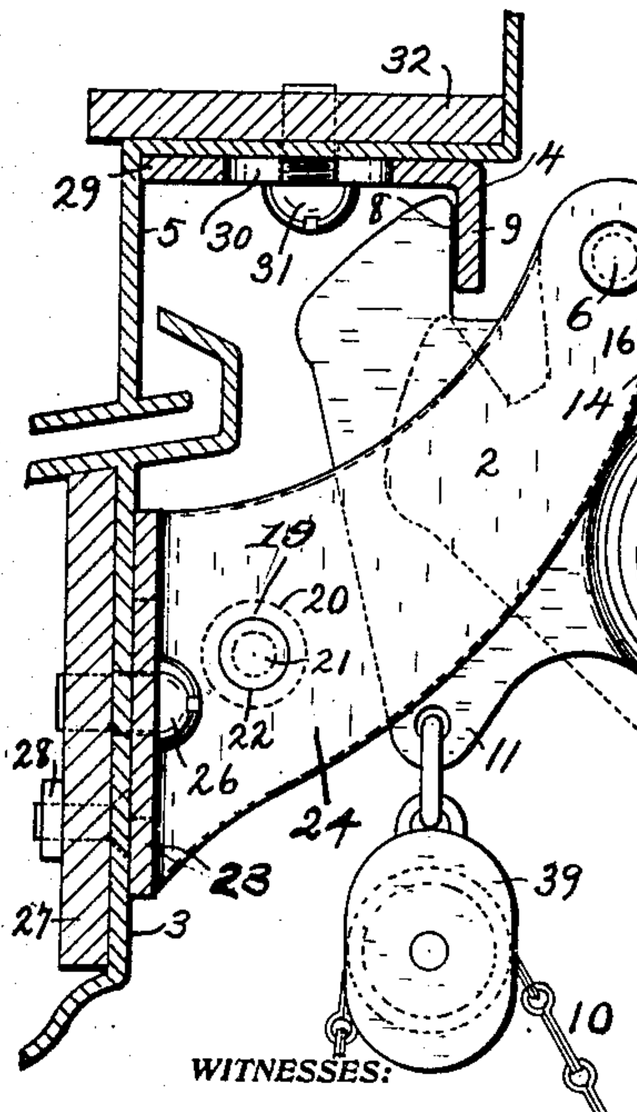
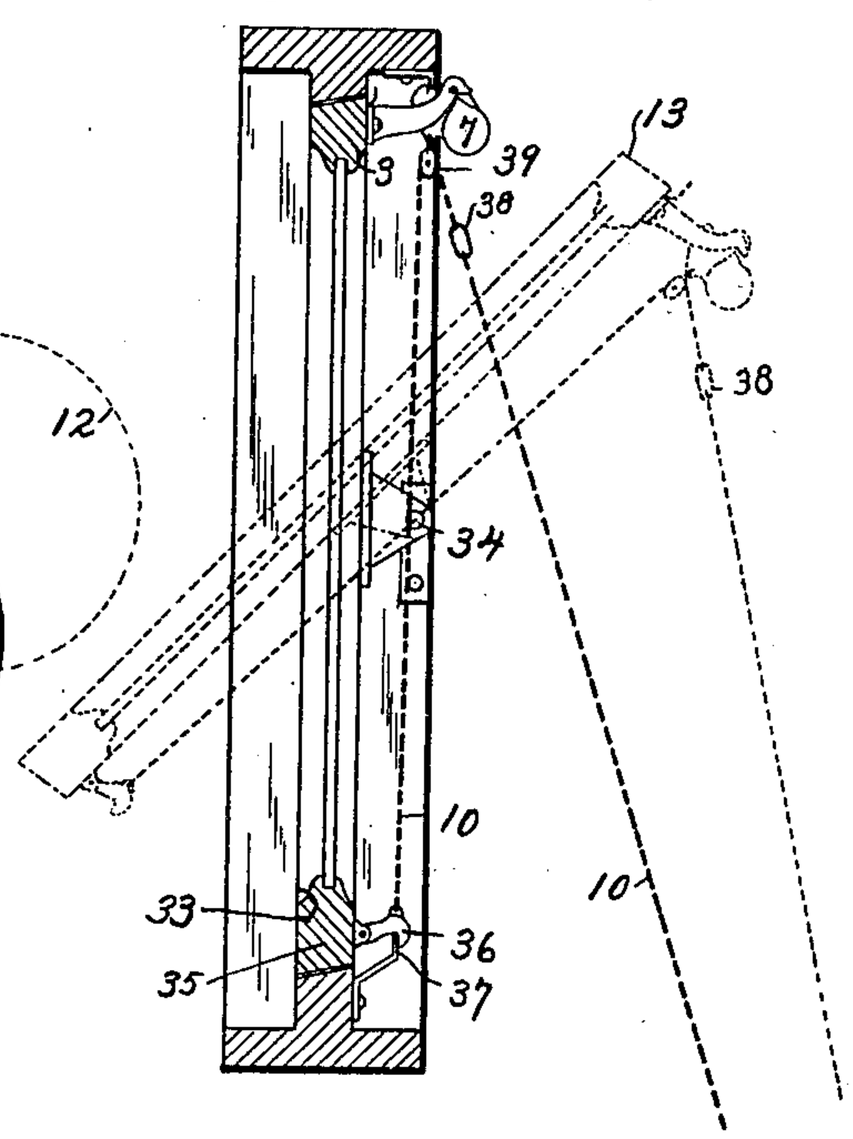


Fig. 4.



WITNESSES:

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GRAVITY SASH-LOCK.

No. 913,096. Specification of Letters Patent. Patented Feb. 23, 1909.

Application filed August 24, 1908. Serial No. 450,057.

To all whom it may concern:

Be it known that I, FREDERICK BOGENBERGER, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Gravity Sash-Locks, of which the following is a specification.

My invention relates particularly to a class of gravity actuated locks which are used in connection with fire proof windows or windows of sheet metal construction, having sash which swing on pivots and which are designed to close automatically.

The object of my invention is to provide a lock for this purpose, which is so constructed that its parts can be easily and cheaply manufactured, and quickly assembled.

My invention is further arranged to be fitted and adjusted to each individual window with a minimum of labor and trouble.

My invention also aims to provide a lock which is perfect and responsive in its action.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1, represents a face view of my lock and portions of the sash and frame to which it is attached. Fig. 2, is a side view of my invention, with portions of the sash and frame to which it is attached, shown in section. Fig. 3, is a perspective view of the strike plate. Fig. 4, is a sectional elevation of a window showing the application of my invention. Fig. 5, shows a section of the rivet which combines the supporting arms.

In the embodiment illustrated, my invention comprises, a pawl 1, pivotally carried by the supporting arms 2, which are fastened to the upper sash rail 3, and a strike plate 4, fastened to the head of the window frame 5. The pawl 1, pivots or revolves on the pin or rivet 6. The heavily weighted portion 7, tends to raise the hook 8, which engages the stop 9, of the strike plate. The lock is operated by a chain 10, or other suitable means, fastened at 11. A downward and slightly outward pull exerted upon this chain throws the pawl 1, into a position indicated by the dotted outline 12, Fig. 2.. In this position the hook 8, just escapes the stop 9, and allows the outward pull exerted on the chain to carry the lock and sash into the position indicated by the dotted outline 13, in Fig. 4.

The pawl 1, has on each side, adjacent to the weighted portion 7, a shoulder 14. When the lock is in a closed position, the edge 15, of the shoulder 14, rests upon the supporting arms at 16. When the lock is thrown into an open position, the edges 17, of the shoulders 14, engage the protruding prongs 18, permitting the lock to be opened only far enough so that the hook 8 passes the stop 9.

At 19, the supporting arms 2, are reinforced and strengthened by an arrangement which consists of a short piece of steel tubing 20, Fig. 5, which keeps the arms 2, a specified distance apart, and a rivet 21, which passes through the tubing 20, and the arms 2, and is headed on the outside of each arm, as at 22.

The supporting arms 2, are provided with flanges 23, at right angles to the protruding arms 24, and are provided with oblong slots 25, providing an adjustment arrangement, when the bolts 26, which hold the supporting arms 2, are tightened. These bolts 26, pass through the sheet metal of the sash rail 3, and tighten in screw engagement with the reinforcing plate 27. This plate 27, consists of a piece of ordinary band iron, and is permanently attached to the inside of the sash rail by ordinary flat headed bolts, as shown at 28, Fig. 1. The strike plate 4, is similarly arranged for adjustment. The flat portion 29, is provided with the oblong slots 30, through which the bolts 31, pass and tighten in screw engagement with the reinforcing plate, 32.

It is intended that my invention be used in connection with a similar gravity lock on the lower sash rail, and that the sash shall close and lock automatically in case of fire. In Fig. 4, we have a window frame 32, having a sash 33, swinging on pivots 34. My invention is fastened on the upper sash rail 3, and on the lower sash rail 35, is a lock 36, which engages the strike plate 37. To this lock is fastened the chain 10, with a fusible link 38, the chain passing up to a pulley 39, fastened at 11, through the pulley and down to any suitable fastening means that may be provided to keep the sash open. In the event of a fire near the window the fusible link 38, will separate and the chain 10, will

pass out of the pulley, releasing the sash. The sash is always balanced on the pivots 34, in such a way that the lower half is heavier than the upper half, and consequently the sash closes of its own accord.

When the sash is closing the hook 8, strikes the stop 9, and deflects the pawl 1, into the position shown by the dotted outline 12. In this position the hook 8, immediately engages the stop 9, when the sash is closed. During the closing of the sash it will be comprehended that the pawl is thrown back forcefully, that the shoulders 14, strike the prongs 18, with a great impact and that this impact materially affects the positive closing of the lock.

While the description has shown my lock used in connection with a window of hollow sheet metal construction, it is to be understood that it can be used in connection with windows made of wood or other materials, should occasion arise.

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

1. In a gravity sash lock of the character described, an adjustable strike plate, comprising a downwardly extending lip or stop, a flat fastening body, having slot like apertures and fastening means therefor consisting of a flat reinforcing plate, and holding screws or bolts passing through said apertures and in screw engagement with said reinforcing plate.

2. In a gravity sash lock of the character described, a pawl pivotally carried by supporting arms, said pawl having a hooked portion adapted to engage a strike plate provided therefor, a weighted portion, said weighted portion having shoulders to limit the movement of said pawl, and means provided for attaching an operating chain.

3. In a gravity sash lock of the character described, a pivoted pawl and supporting means therefor, comprising upwardly extending arms carrying a pivoting pin, protruding prongs, strengthening means consisting of a short tubing separator and a fastening rivet, flat fastening bodies having slotted apertures, and fastening means consisting of a flat reinforcing plate, and holding screws or bolts passing through said apertures and in screw engagement with said reinforcing plate.

4. In a gravity sash lock of the character described, the combination of a pivoted pawl having limiting shoulders, an engaging hook and operating means, and supporting means consisting of adjustably fastened arms carrying a pivoting pin, and a strike plate consisting of an adjustably fastened body carrying a downwardly extending lip or stop.

In testimony whereof, I have hereunto set my hand in presence of two subscribing witnesses.

FREDERICK BOGENBERGER.

Witnesses:
A. K. HANSON,
THEO ERNST.