

No. 778,312.

PATENTED DEC. 27, 1904.

W. L. HALL.

SASH LOCK.

APPLICATION FILED 'AUG. 6, 1904.

Fig. 1.

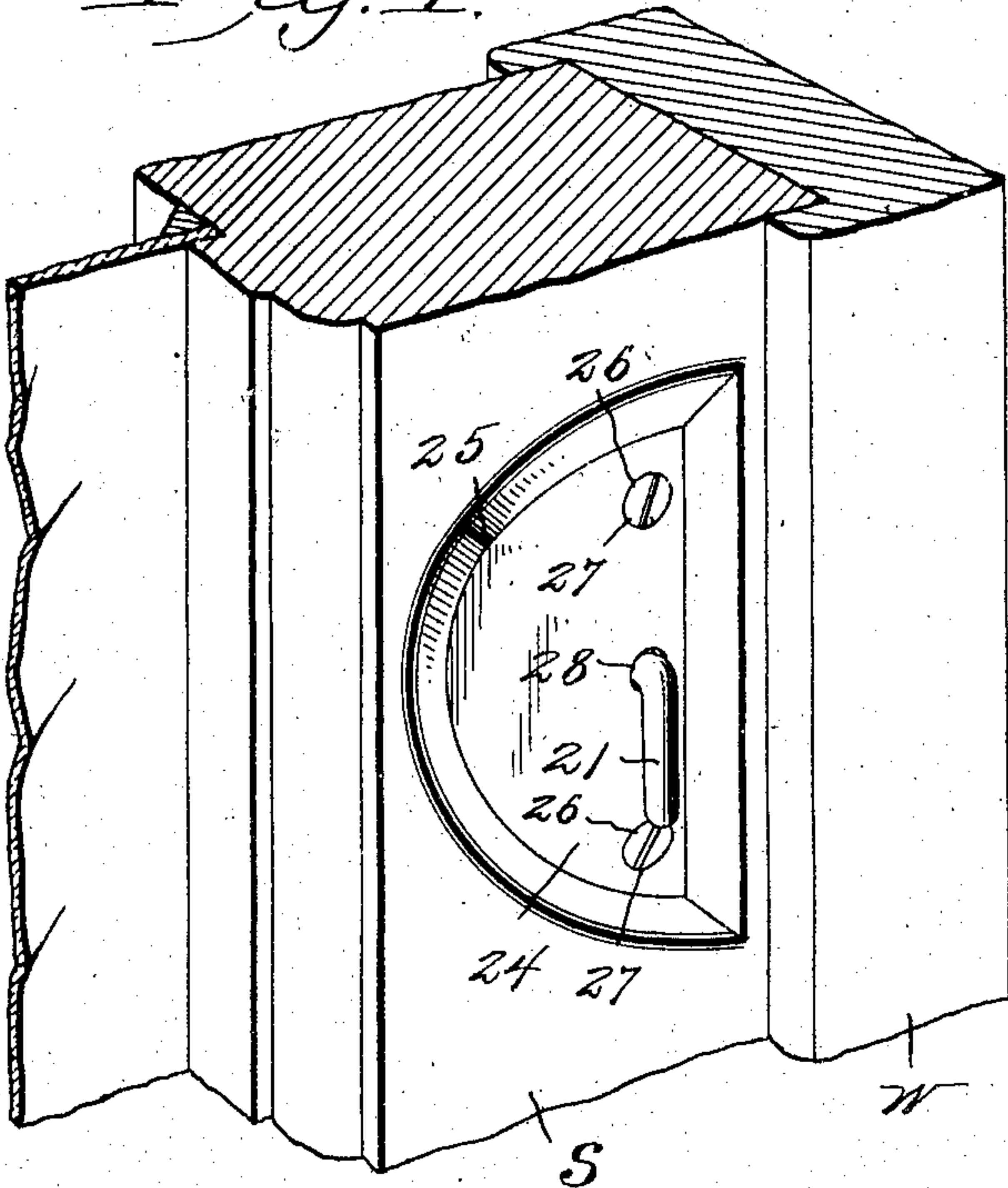


Fig. 2.

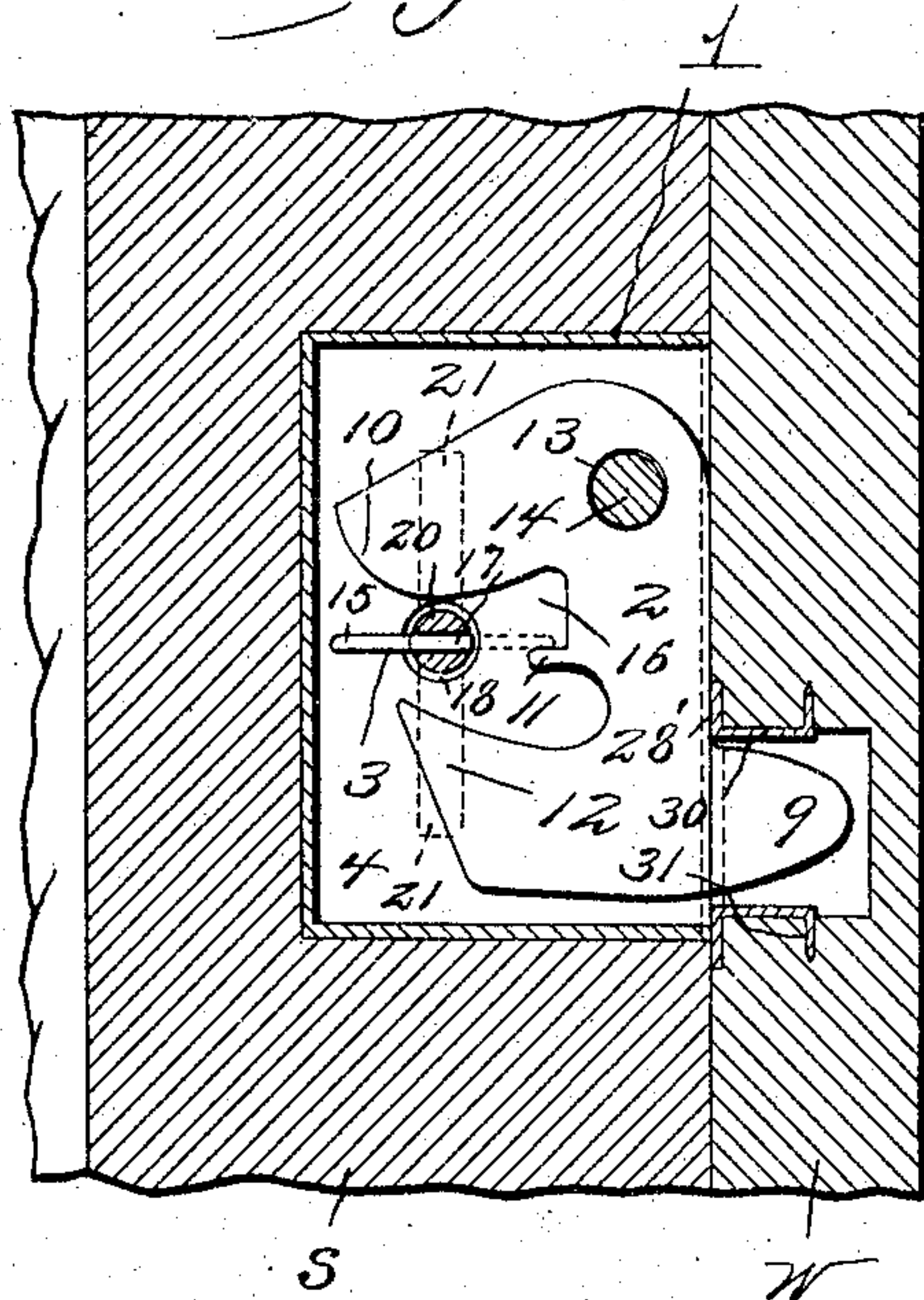


Fig. 3.

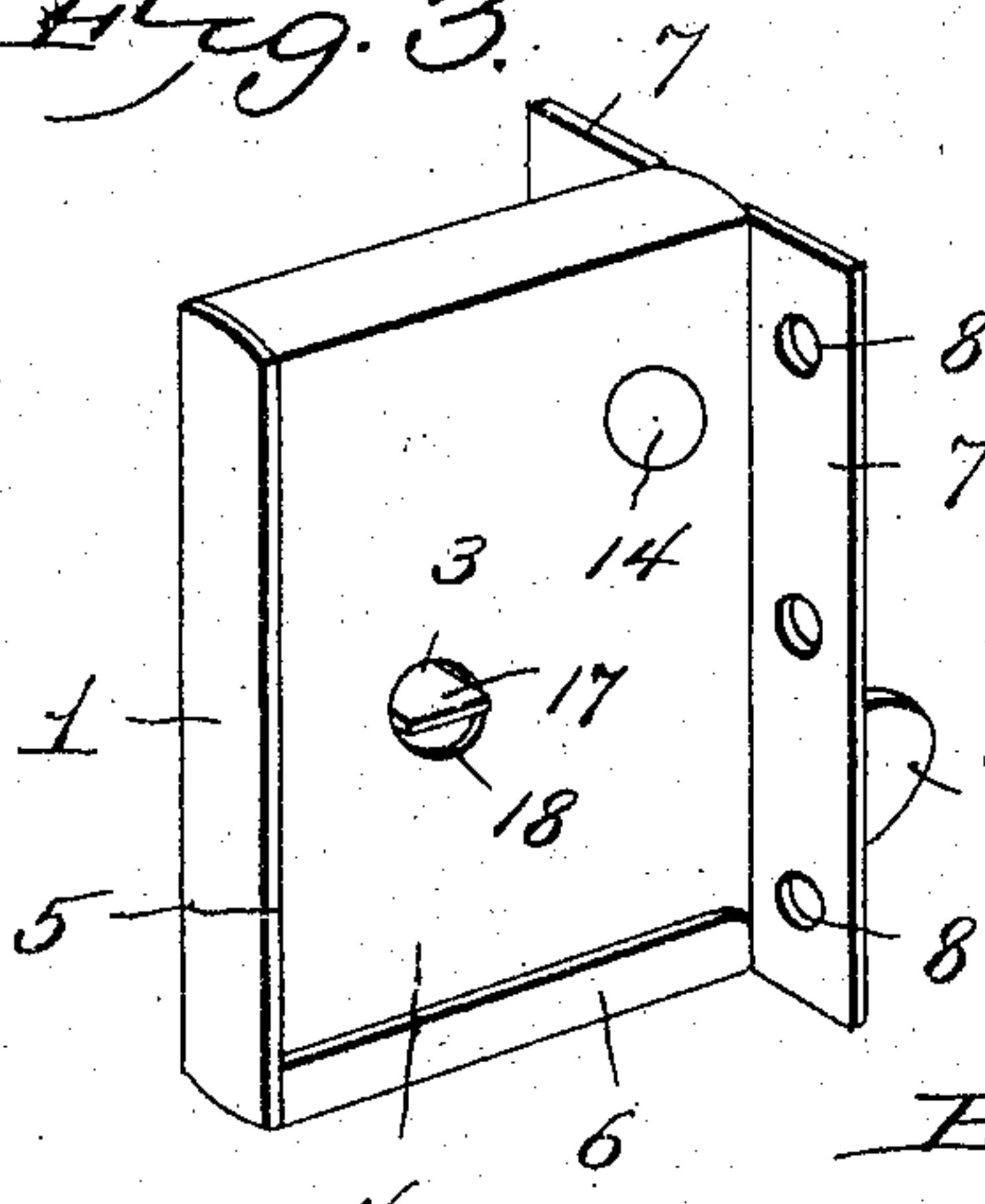


Fig. 4.

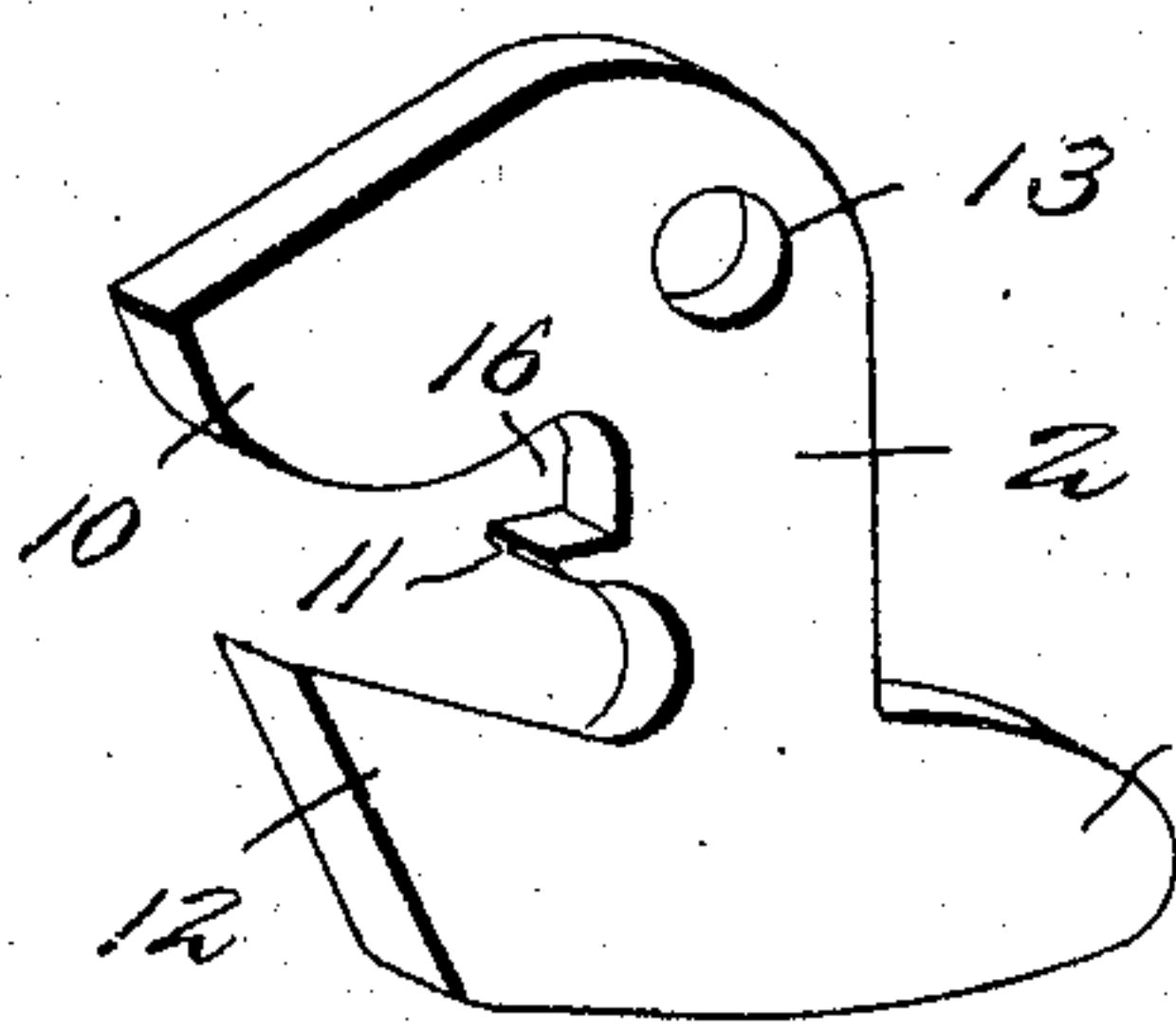


Fig. 5.

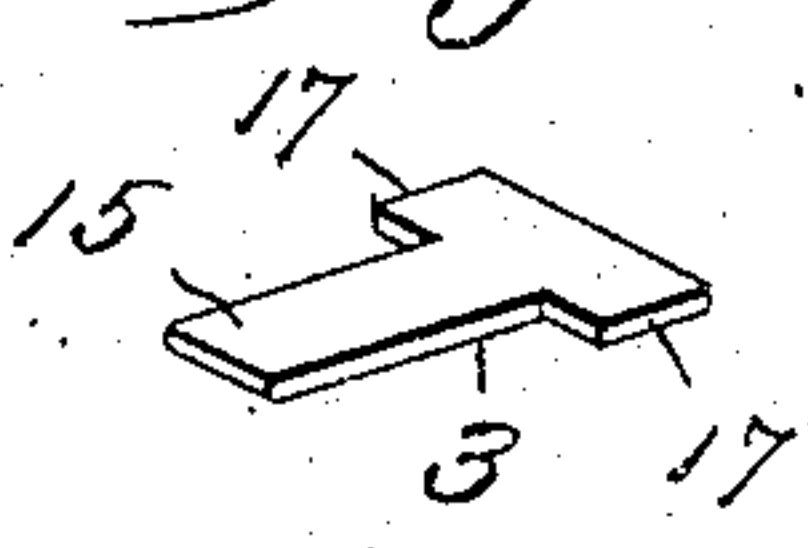


Fig. 6.

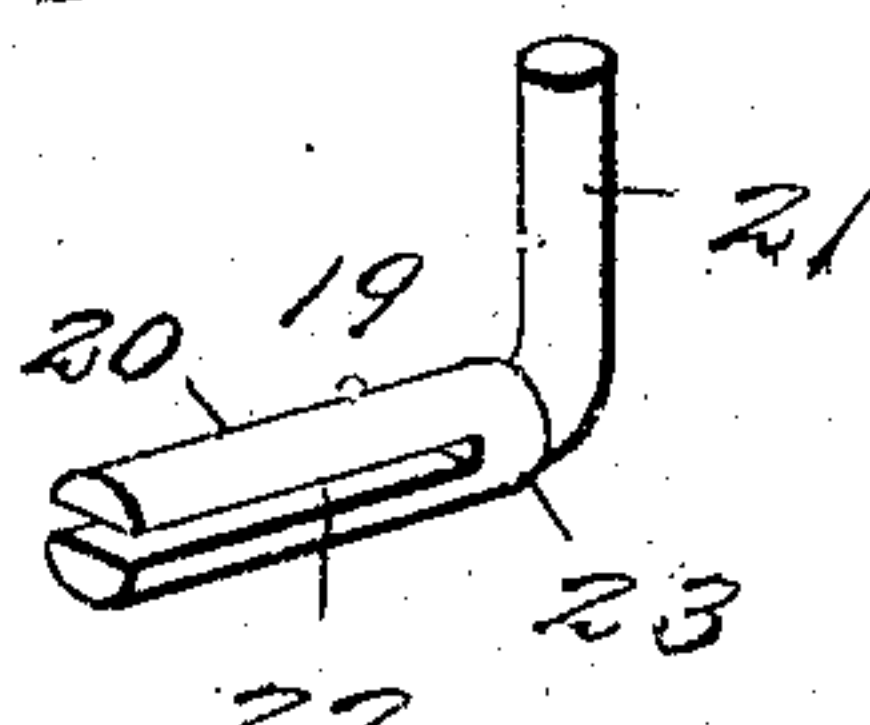


Fig. 7.

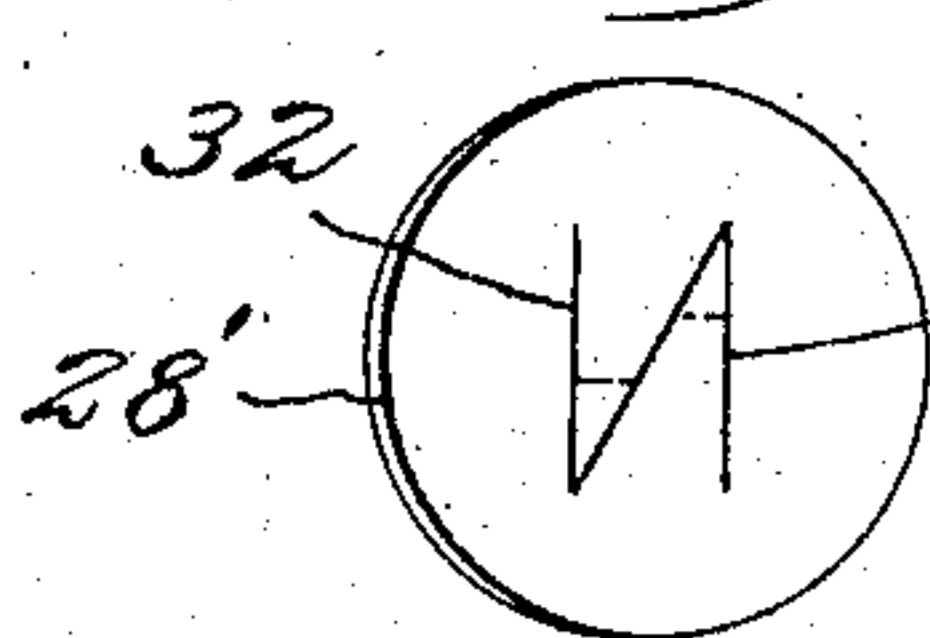
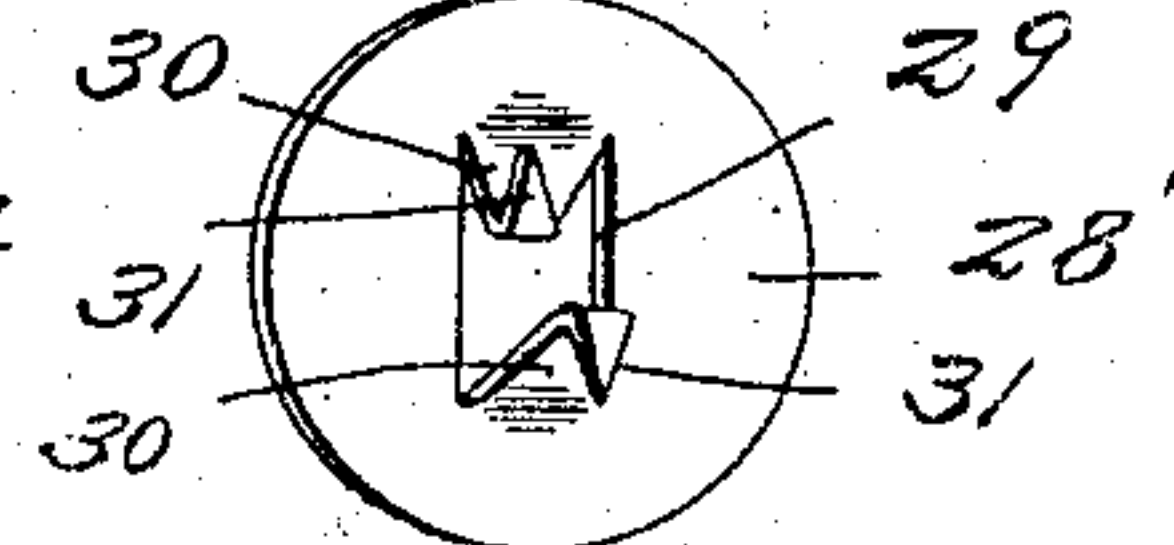


Fig. 8.



Witnesses:

*E. J. Stewart*  
*R. M. Elliott*

Willard L. Hall,

by *C. A. Snow & Co.*  
Attorneys.

Inventor,

Attorneys.



# UNITED STATES PATENT OFFICE.

WILLARD LESLER HALL, OF SPOKANE, WASHINGTON.

## SASH-LOCK.

SPECIFICATION forming part of Letters Patent No. 778,312, dated December 27, 1904.

Application filed August 6, 1904. Serial No. 219,761.

*To all whom it may concern:*

Be it known that I, WILLARD LESLER HALL, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented a new and useful Sash-Lock, of which the following is a specification.

This invention relates to sash-locks.

The object of the invention is to present a sash-lock which shall be simple of construction, thoroughly efficient and durable in use, and capable of being disposed on either sash-rail—that is to say, the right or left hand one—without necessitating any change in the structural arrangement or rearrangement of any of its parts; furthermore, to adapt the lock for use either upon the rail of an upper or lower sash, the disposition of the parts being such that when disposed upon the upper rail there will be no interference between it and the meeting-rail and the lower sash; furthermore, to dispense with the employment of springs for causing the device to be operated; furthermore, to construct the device in such manner as to permit of its being attached at any point upon the sash-rail, thereby to prevent its being tampered with from the outside unless a previous knowledge of its exact location is known.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the novel construction and combination of parts of a sash-lock, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, there is illustrated one form of embodiment of the invention capable of carrying the same into practical operation, it being understood that the elements therein exhibited may be varied or changed as to shape, proportion, and exact manner of assemblage without departing from the spirit thereof.

In the drawings, Figure 1 is a view in perspective of a portion of a sash-rail and a window-frame, exhibiting the device of the present invention applied thereto. Fig. 2 is a vertical sectional view of the sash-lock. Fig. 3 is a perspective view of the lock-casing. Fig. 4

is a detached detail view in perspective of the bolt. Fig. 5 is a similar view of the tumbler. Fig. 6 is a similar view of the key. Fig. 7 is a plan view of a blank from which the bolt-socket is constructed. Fig. 8 is a perspective detail view of the bolt-socket as it appears when ready for use.

Referring to the drawings, S designates a part of one of the sash-rails of a window, and W a portion of the window-frame, and as these parts may be of the usual or any preferred construction further description thereof is deemed unnecessary. As herein shown, the sash-rail exhibited belongs on the right-hand side of the window; but, as before stated, the present invention is applicable to either sash-rail, and as this will be apparent by the description presently to follow detailed illustration of its application in another position is omitted.

The sash-lock which constitutes the present invention comprises a casing 1, in which is housed a bolt 2 and a tumbler 3 coacting therewith. The casing is by preference made of a single sheet of metal stamped to the appropriate form, the object being to dispense with the employment of rivets, solder, or any other means for holding the parts of the casing assembled, and to obviate this it is made of a single piece fashioned by suitable mechanism to the appropriate shape. The casing embodies a boxing 4, the rear end of which is closed by an inturned flange 5 and the lower end by an upturned flange 6, the front of the boxing being provided with outturned wings 7, disposed in alinement and provided with a plurality of orifices 8, through which extend the fastening devices to assemble it with the sash-rail.

The bolt 2 is provided at its front with a curved nose 9 and at its rear with a curved ward 10 to be engaged by the tumbler 3 when the bolt is to be locked. In addition the rear side or edge of the bolt is provided with a stop 11 for limiting the movement of the tumbler and with an extension 12, against which a tumbler bears when the bolt is unlocked. The bolt is provided at its upper forward portion with an orifice 13, through which passes a bolt or rivet 14, preferably



the latter, the ends of which are upset for the purpose of holding it in position. By disposing the orifice 13 at the point exhibited the lower portion of the bolt is counter-weighted, and thus will always cause the nose 9 to project beyond the casing. The tumbler 3, to which reference has been made, is a T-shaped structure, the locking member 15 of which is adapted to engage a tumbler-notch 16, formed above the stop 11, and the arms 17 of which are disposed within orifices 18 in the sides of the casing. The tumbler is herein shown as constructed from a flat piece of metal, and this is the form in which it will generally be made on account of its cheapness and readiness with which it may be produced; but it is to be understood that the invention is not to be limited to this precise construction, as the part may be otherwise made and still be within the scope of the invention.

The means for actuating the tumbler consists of a key 19, having a longitudinally-bifurcated shank 20 and a reduced stem or handle 21 extending approximately at right angles to the shank, the bifurcation 22 of the shank being adapted to straddle the tumbler, thus to effect its turning. In practice the shank will be made of such length as to adapt it to sash-rails of different thickness, any excess of material present being removed by merely filing off the end of the shank. The handle is reduced in order to present a shoulder 23, which is adapted to bear against the inner side of a plate or escutcheon 24, secured to the sash-rail, the shoulder positively operating to prevent the key from being withdrawn or accidentally separated from the lock. As before stated, it is one of the objects of this invention to obviate any interference between the two sashes when being raised or lowered, and to secure this result the escutcheon 24 is housed within a recess 25, cut in the side of the sash-rail, and is held therein by screws 26 passed through openings 27 in the escutcheon. Intermediate of the openings 27 is a third opening 28, through which projects the handle of the key. It will be noted that as both sides of the casing are the same and both arms 17 of the tumbler the same that the sash-lock is adapted to be fastened upon either the right or left hand sash-rail without changing the relative positions of any of these parts. Another advantage in disposing the handle of the key below the surface of the sash-rail is that it will be impossible to see from the outside window just where it is located, so that any tampering with the key from without will positively be prevented. Where the sash-lock is placed on the inner sash-rail, the key need not be disposed below the surface of the rail.

The operation of the lock thus far described is as follows: The tumbler being in unlocked position, as shown by full lines in Fig. 2, the

key is inserted, and upon turning it to the right the tumbler is caused to ride against the ward 10 and rocks the bolt, causing the nose to move within the casing, and this will permit the tumbler to pass the ward and engage with the stop 11, as shown by dotted lines in Fig. 2, where it is positively held from either upward or downward movement. Any inward pressure applied to the nose 9 will cause the arms of the tumbler to be jammed against the walls of the orifices 18, and thus positively hold the bolt against movement. Upon the tumbler being turned in a reverse direction the bolt is again rocked in a manner opposite to that described. As herein shown, the tumbler engages the bolt at a point approximately midway of its length; but it is to be understood that it may engage it at any other preferred point of its length, to effect which the stop 11 will merely have to be raised or lowered, as desired, and the width of the extension 12 may be varied to secure this result.

Secured in the window-frame is a novel form of bolt-socket which combines in a simple and positive manner high efficiency and durability in use and positive security against being accidentally or even forcibly detached when once placed in position. This socket is preferably struck up from sheet metal and comprises a disk 28', having at its center, or approximately so, a rectangular opening 29, formed by separating the metal to form two attaching spurs or prongs 30. As clearly shown in Fig. 8, these spurs are angularly disposed relatively to each other and their terminals 31 are outturned to form a means of securing the device in position. In order to cause the spurs to be approximately wedge-shaped when viewed in plan, thus to give each a sharp point and a broad base, the blank is pierced by an approximately N-shaped slit 32, (shown in Fig. 7,) and by turning the spurs thus formed outward and bending their terminals in the manner shown in Fig. 8 the complete socket is presented. In positioning the socket within the window-frame a brace-bit is employed which will be exactly the same diameter of the blank, and a shallow cut is made just sufficient to cause the blank or body to lie flush with the base of the frame. A smaller bit is then employed of a size equal to the distance between the ends of the opening 29, and an orifice of the desired depth is bored. The socket is then placed within the pocket thus formed, and by means of a suitable implement the spurs are forced at right angles to the face of the disk, thus driving the points 31 into the wood of the frame and securing the socket firmly in position.

It will be seen from the foregoing description that although the device of this invention is exceedingly simple of construction it combines in a ready and practical manner all of the features requisite to the presentation of a sash-lock that shall be strong, durable, and



thoroughly effective in operation and not liable to get out of order from long continued use.

While the embodiment of the invention herein shown is that which will generally be preferred, it is to be understood that in carrying the invention into effect various changes as to shape, proposition, and manner of assemblage of the parts may be resorted to without departing from the scope of the invention.

10 Having thus described the invention, what is claimed is—

1. A sash-lock comprising a casing, a bolt pivoted therein, a T-shaped tumbler having its arms mounted in orifices in the casing and its shank disposed to engage the bolt to swing it, and a split key adapted to straddle the arms of the tumbler and provided with means to prevent its accidental separation therefrom.

2. In a sash-lock, the combination with a casing, of a bolt pivoted therein and provided at its front edge with a rounded nose projecting beyond the casing and at its rear edge

with a ward and with a stop disposed intermediate of the ends of the bolt, a T-shaped tumbler having its arms disposed in orifices in the casing arranged practically in alinement with the stop, a split key to straddle the tumbler provided with an angular extension forming a handle and with a shoulder at the angle of the handle, and a plate to hold the key against accidental separation from the tumbler. 25 30

3. In a sash-lock, a bolt-socket consisting of a disk, having an approximately N-shaped slit forming thereby two prongs the opposite edges of which are disposed at angles to each other, and the terminals of the prongs being bent outward to form attaching means. 35

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLARD LESLER HALL.

Witnesses:

A. S. CAREY,  
JOHN MACK.