No. 610,155. Patented Aug. 30, 1898.

R. D. DUFF.

SASH LOCK.

(Application filed May 26, 1897.)

(No Model.)

Fig. 1.

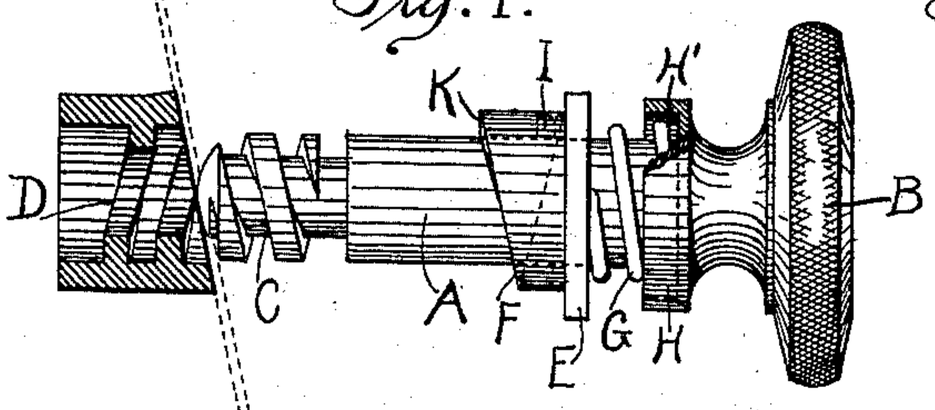

Fig. 2.

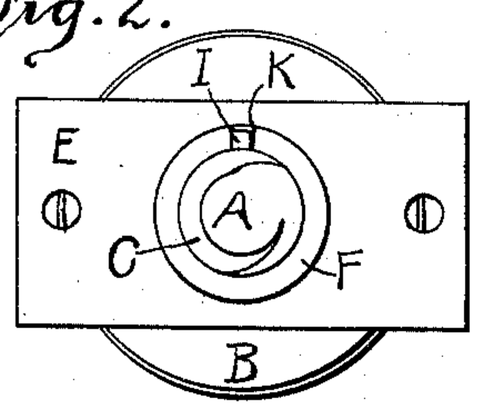

Fig. 3.

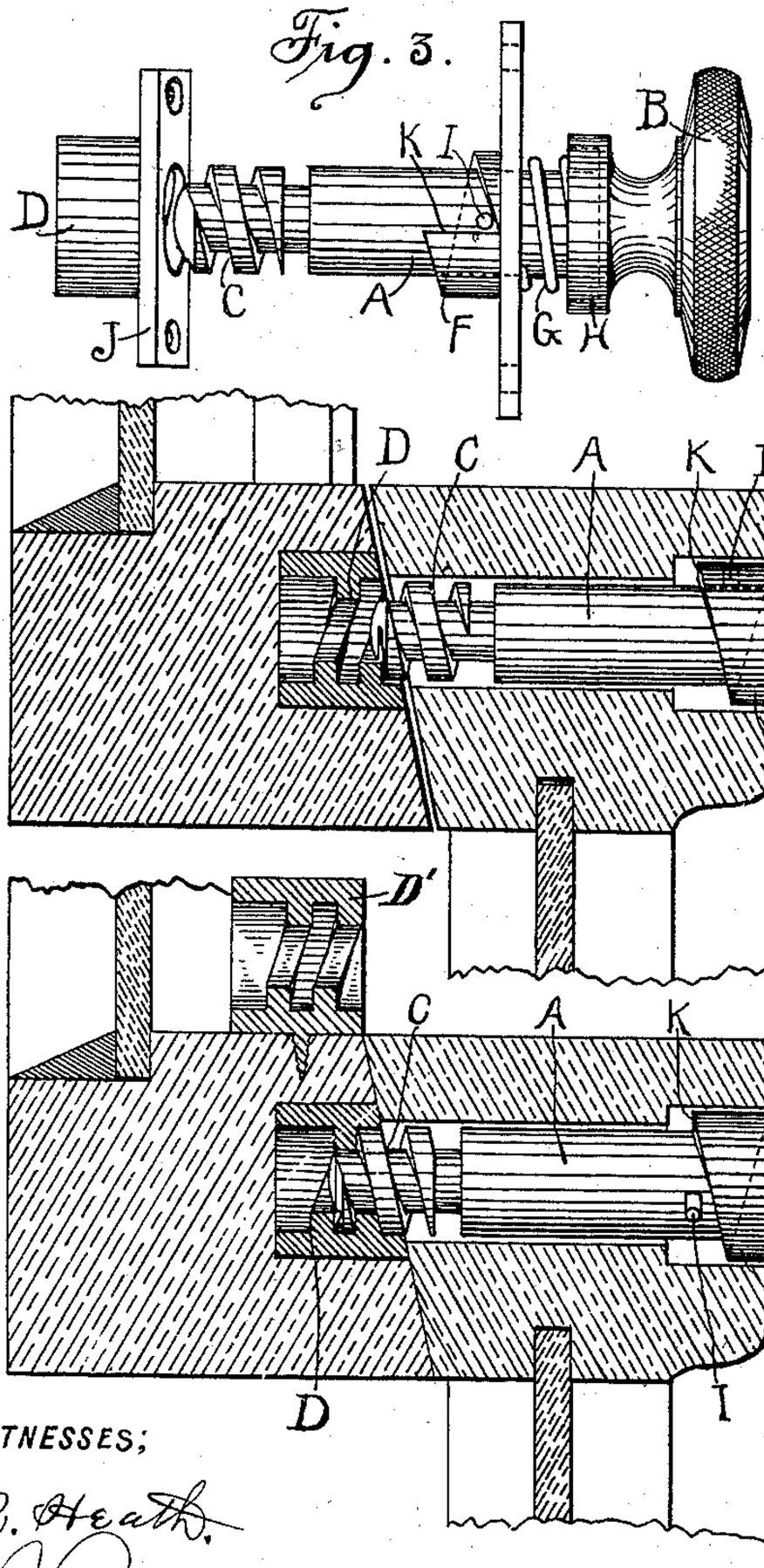

Fig. 4.

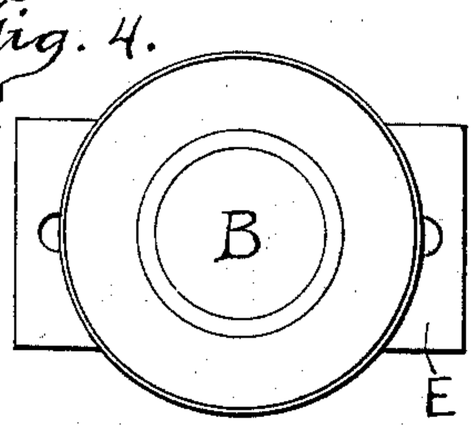

Fig. 5.

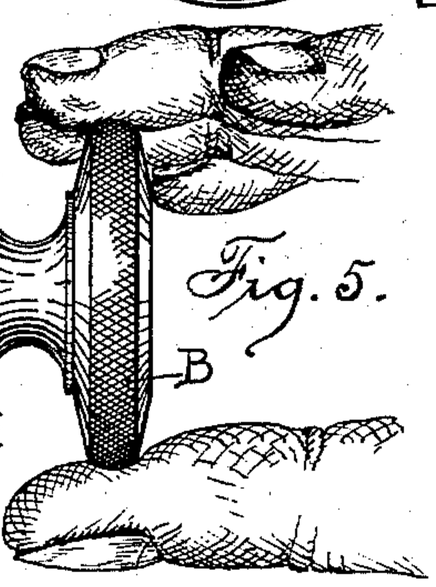

Fig. 6.

WITNESSES;

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ROBERT D. DUFF, OF TACOMA, WASHINGTON, ASSIGNOR OF ONE-FOURTH TO JOHN E. JOHNSON, OF SAME PLACE.

SASH-LOCK.

SPECIFICATION forming part of Letters Patent No. 610,155, dated August 30, 1898.

Application filed May 26, 1897. Serial No. 638,262. (No model.)

To all whom it may concern:

Be it known that I, ROBERT D. DUFF, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented a new and useful Sash-Lock, of which the following is a specification.

My invention relates to improvements in sash-locks commonly used to fasten the meeting-rails of the upper and lower sashes of a window.

The object of my invention is to securely lock the sash together, so that the window cannot be opened and the rattling of the sash will be prevented. I attain this result by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the device when unlocked, with the screw-socket shown in section. Fig. 2 is a rear end view of the locking-shaft, the screw-socket being omitted. Fig. 3 is a top view of the complete device when unlocked. Fig. 4 is a front or face view of the device. Fig. 5 represents a section through the meeting-rails of a window-sash with the sash-lock in place and in the process of being locked. A side view of the shaft and knob-handle is shown, with the screw-socket in section. Fig. 6 is a view the same as Fig. 5 after the sash is locked.

Similar letters refer to similar parts in the several views.

The device consists of a solid turned shaft A, with a knob-handle B on one end and a heavy screw C cut on the other end. A screw-socket D is made to fit and receive the screw C. The plain-faced escutcheon E, having a short cylindrical cam F on its inner side, is neatly fitted around A, with a small spiral spring G between the face of E and the hub H of the handle-knob. The hub, it will be observed, is reamed or hollowed out, as seen at the partial section H′, to allow the spring G to extend into it. A small pin I is set into the shaft A to stop the turning of the knob as soon as the sash is unlocked and to hold the screw C in a proper position at all times for locking the sash, as hereinafter more fully described.

To fit the lock to the window-sash, a hole of the proper size and form is bored through the upper rail of the lower sash and the shaft fitted into it. The escutcheon E is set flush with or on the face of the sash and firmly fastened in place with two screws, and the lock is then in place ready for use.

The screw-socket D is fitted to the lower rail of the upper sash by boring a hole of the proper size and depth and directly in line with the shaft A. The socket is fastened in place by two screws through the face-escutcheon J, which is set in flush with the sash-rail. It will be noticed that the socket and escutcheon are one piece of metal, which makes a strong screw-socket to receive C.

It is to be observed that the pin I is set at such a position that when the lock is fitted in place the thread of the screw C is in the right position to enter the thread of the socket D, as can be seen at Figs. 1 and 5.

To lock the sash, the operator takes hold of the knob B and pushes straight in till C comes against D, as seen in Fig. 5, then turns the knob to the right, when C screws into D and the sash-rails are drawn tightly together and thus securely locked. The hollow hub is drawn firmly against the face of E, and the spring G is concealed from view in the hub, all of which is shown in Fig. 6. It will be observed that in the operation the small peg I has moved with A to the position indicated in Fig. 6. To unlock the sash, the knob is turned to the left till C is withdrawn from D, and I will have moved round with A till it is stopped by coming against the shoulder K of the cylindrical cam F, when the spring G pushes the shaft outward till I rests in the bottom of the cam, as plainly seen in Fig. 3 and as indicated in Fig. 1. By this means the point of the sash is drawn in flush with the sash-rail, and the sash can be opened by lowering the upper one or by raising the lower one without the lock in the least interfering with the movement. By means of the spring G and the little peg I and the cam F the shaft is always kept in such a position that C will screw into D at the first turn of the knob after being pushed into contact with each other, as in the above-described process of locking the window.

D′ represents a socket formed with screw-threads similarly to socket D and secured to the meeting-rail of the top sash by a screw-

pin or otherwise, so that the bolt A may engage with said socket when the top sash is slightly lowered or the lower sash slightly raised, thus permitting the two sashes to be locked together when either sash is slightly opened.

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

1. In a sash lock or bolt having a turned shaft with a knob-head and screw-point, and fitted into the meeting-rail of the lower sash of a window as shown, and having a screw-socket made and fitted into the meeting-rail of the upper sash to receive the screw of the shaft fitted into the lower sash for the purpose of locking the window as described, the combination of an escutcheon having a cylindrical cam fitted around the shaft, a spiral spring fitted loosely around the shaft and between the escutcheon and the hub of the knob-handle, the hub made hollow to receive and conceal the spring, and a small pin or peg set into the shaft at such a point that when at the bottom of the cam, the screw-point of the shaft will be in position to enter the screw-socket made and set to receive it when the shaft is pushed into contact with it, and the knob is turned to the right, substantially as shown and described.

2. In a sash-lock, the combination with an interiorly-screw-threaded socket, of a rotatable and longitudinally-sliding screw-threaded bolt to engage the threads in said socket, a pin projecting from the side of the bolt, and a fixed shoulder extending lengthwise of the bolt in a parallel line therewith to permit the pin in the rotation of the bolt to come in contact with the shoulder to stop the rotation of the bolt and at the same time permit the pin to move along and be guided by the shoulder in the longitudinal sliding movement of the bolt toward the socket, substantially as and for the purposes described.

3. In a sash-lock, the combination with an interiorly-screw-threaded socket, of a rotatable and longitudinally-slidable bolt formed with screw-threads at one end, a stud and a cam, one of which is fixed, and the other movable with the bolt, said cam being formed with a shoulder for the stud to abut against, and a spring for moving the bolt longitudinally, substantially as and for the purposes described.

In testimony whereof I have affixed my signature in the presence of two witnesses.

ROBERT D. DUFF.

Witnesses:
G. W. BULLARD,
H. P. HANSEN.