

No. 894,767.

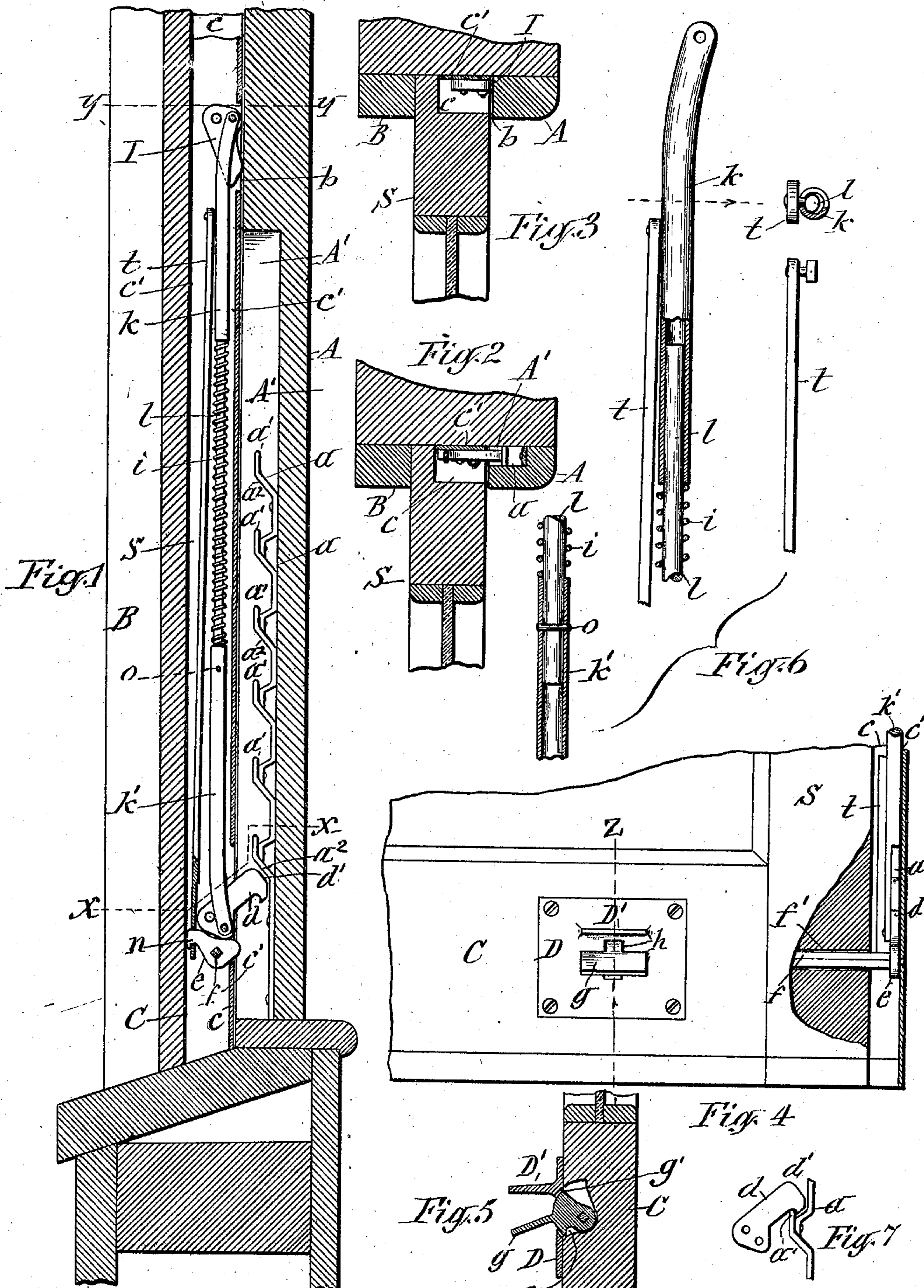
H. O. WOLFF.

PATENTED JULY 28, 1908.

SASH LOCK AND TIGHTENER.

APPLICATION FILED DEC. 30, 1907.

2 SHEETS—SHEET 1.



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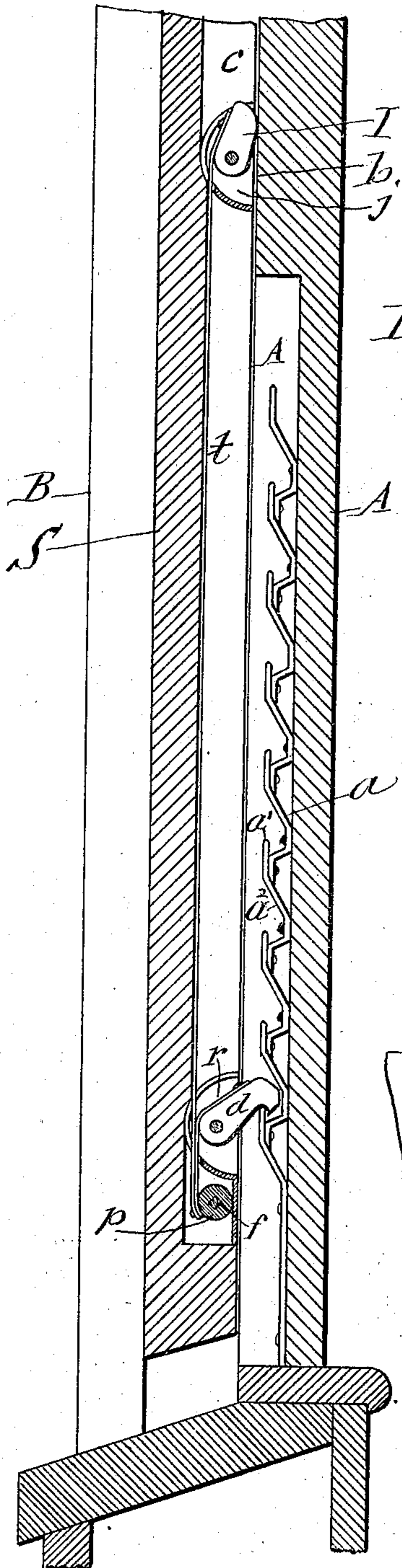


Fig. 8

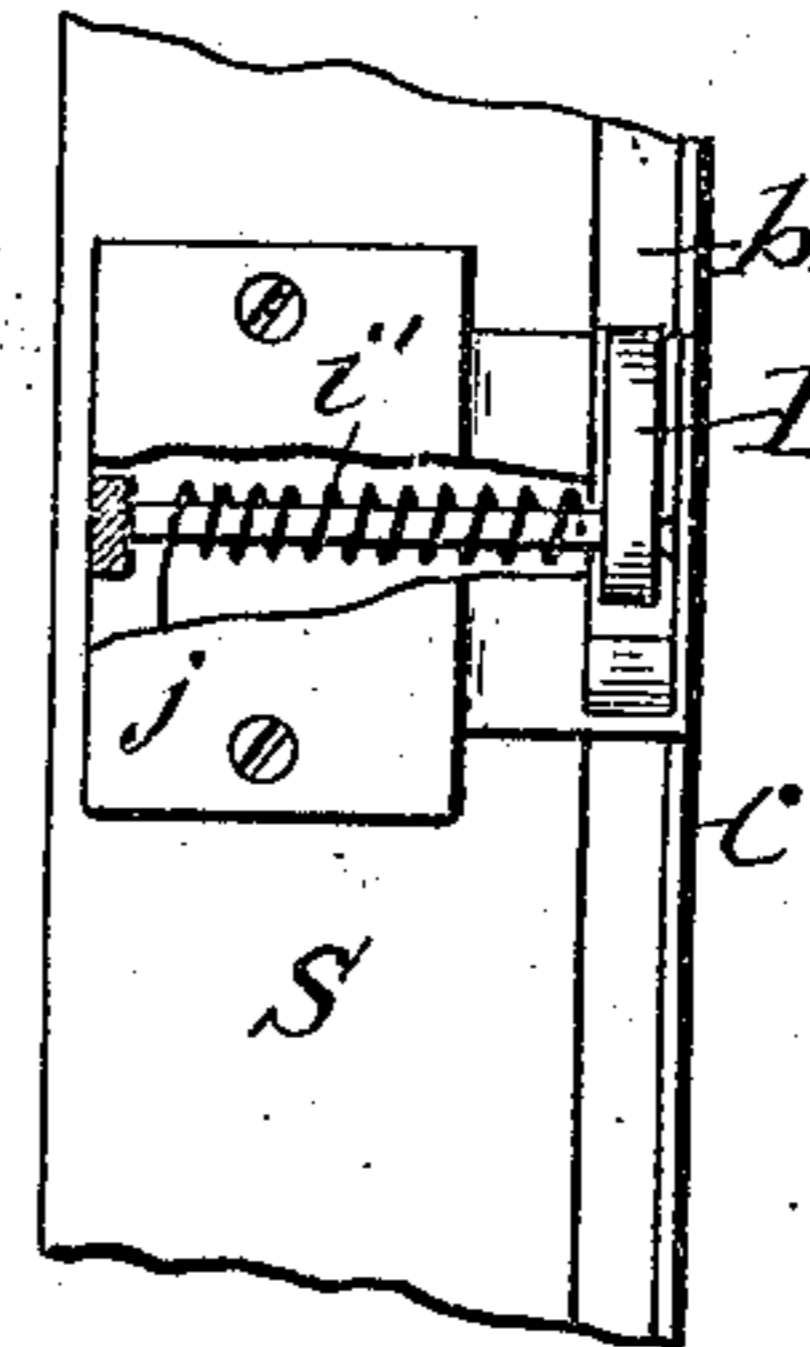


Fig. 10

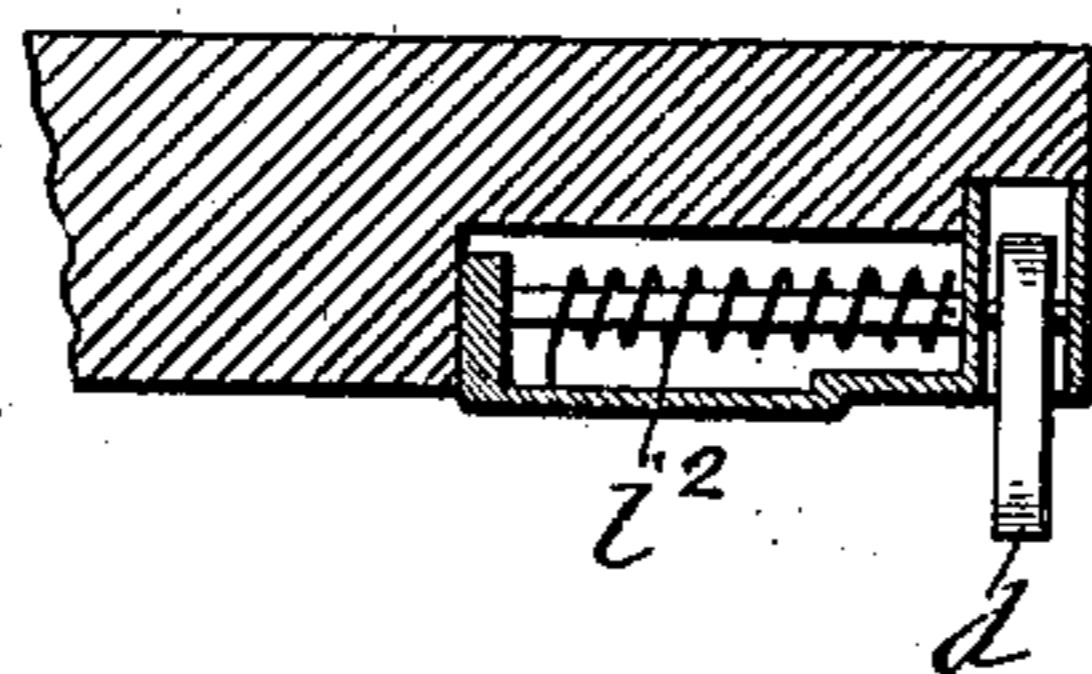


Fig. 11

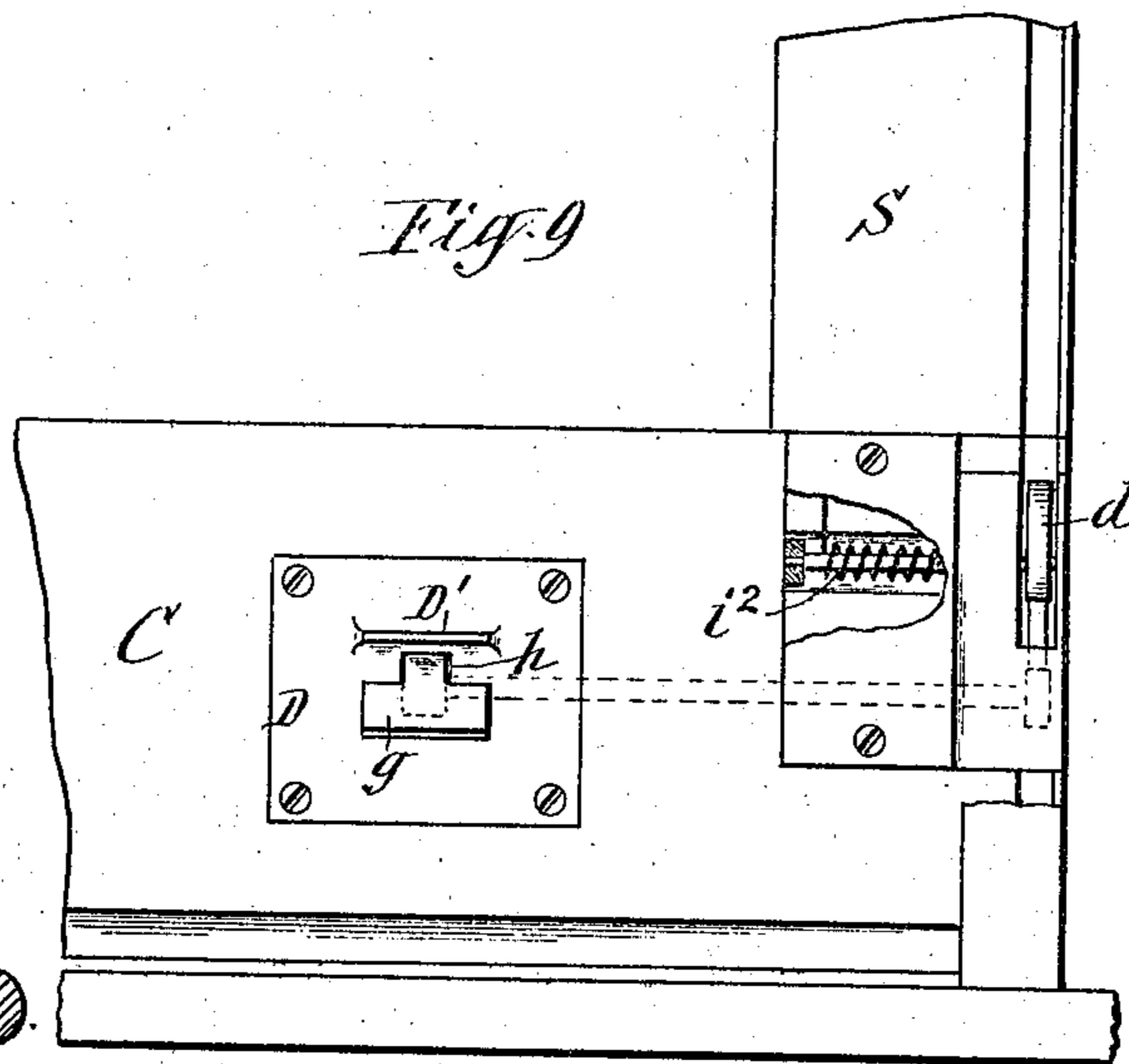


Fig. 9

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UNITED STATES PATENT OFFICE.

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SASH LOCK AND TIGHTENER.

No. 894,767.

Specification of Letters Patent.

Patented July 28, 1908.

Application filed December 30, 1907. Serial No. 408,463.

To all whom it may concern:

Be it known that I, HERMAN O. WOLFF, a citizen of the United States, and resident of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Sash Locks and Tighteners, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention consists in improved means for securely locking the window-sash in its closed position and sustaining it at different elevations in its open position and also in means for tightening the sash in the window-casing so as to prevent the sash from rattling and exclude air from the joints between the sash and its bearings in the casings, all as hereinafter explained and claimed.

In the accompanying drawings Figure 1 is a vertical section through the stile of the sash and the inner jamb, or so-called window stop showing the invention applied thereto; Figs. 2 and 3 show enlarged horizontal sectional views respectively on the lines —X—X— and —Y—Y— in Fig. 1; Fig. 4 is an enlarged fragmentary front view showing the devices for unlocking and raising the sash; Fig. 5 is a transverse section on the line —Z— in Fig. 4; Fig. 6 illustrates some of the details of the invention; Fig. 7 is a detached view of the dog engaged to support the sash in its open position; Fig. 8 is a vertical sectional view of a modification of my invention; Figs. 9 and 10 are detail views of said modification; and Fig. 11 is a transverse section of Fig. 10.

In the said drawings —S— denotes one of the stiles of the sash, —A— is the inner jamb, usually called window-stop, which is attached to the window casing to retain the sash therein. —B— is the outer jamb, which in two sashed windows is designated the dividing strip. The inner jamb —A— is formed with a vertically elongated recess —A¹— in the edge adjacent to the sash, and in the said recess is a series of suitable catch-plates —a—a— preferably composed of metal rigidly attached to said jamb, as indicated at —a³—a³— and formed with short upwardly projecting tongues —a¹— and bearing faces —a²— between said tongues and main or central portions of the metal strips. The recess —A¹— with the series of catch-plates terminates at a suitable distance from the top of the sash to cause the edge of the jamb —A— to present a continuous even

track —b— above the recess —A¹— for the purpose hereinafter made apparent.

The edge of the stile —S— adjacent to the jamb —A— is provided with a recess —c— extending lengthwise of the stile, and in the said recess is rigidly secured a metal bar —c¹— which is preferably L-shaped in cross-section and disposed with its wall flush with the front and side of the stile.

To the lower end portion of the bar —c¹— is pivoted the sash-locking dog —d— the free end of which is hook-shaped to engage the tongue —a²— of one of the catch-plates —a— as shown in Fig. 7 and thereby sustain the sash at the desired elevated open position. The free end of the dog is also formed with a transverse shoulder —d¹— which is shaped to engage the lowermost bearing-face —a²— as shown in Fig. 1 so as to prevent the sash from being raised to its open position.

The pivoted end of the dog is elongated transversely and under the said end is a lever —e— which is firmly attached to a horizontal shaft —f— pivoted to the wall —c¹— of the bar —c— and extending into a channel —f¹— formed in the bottom rail —C— of the sash (see Fig. 4). The inner end of said shaft is pivoted to the said bottom-rail and has fastened to it a lever —g— by means of which the dog can be thrown out of engagement with the catch-plate —a—.

To the exterior of the bottom rail —C— is fastened a plate —D— which has projecting from it a rigid thumb-piece —D¹— disposed above the lever —g—, which protrudes through an opening —h— in the plate —D— as shown in Figs. 4 and 5. The said opening is sufficiently large to receive in it a stop-shoulder —g¹— formed on the lever —g— and in position to contact with the upper edge of the opening —h— and leave the lever in a convenient position to be operated in unlocking the sash.

—I— represents a cam which is pivoted to the upper end portion of the bar —c¹— and disposed to bear on the even track —b— so as to press the sash outward and tighten the joint between the exterior of the sash and inner side of the outer jamb —B—. Said cam is actuated by an individual spring —i—, which may consist of a spring wire coiled around the pivot of the cam and pressing with one end on said cam while bearing with the opposite end of the said wire on the plate —j— on which the cam is pivotally mounted as shown in Fig. 10 of the drawings. When

the spring i^1 is employed and arranged in the manner described I provide the dog d with an operating spring i^2 similar to the spring i^1 as shown in Fig. 11 of the drawings. I prefer however to employ a spiral spring i in connection with a tube k depending from the pawl I to which it is connected at a point between the pivots of the cam and the track b on the inner jamb A . A similar tube k^1 is connected to the dog d in the same relative position as the tube k and extends upward from the dog as shown in Fig. 1. In the lower tube k^1 is fastened the lower end of a rod l as shown at o the upper end of which is slidably inserted in the upper tube k . The spiral spring i surrounds the said rod and bears with its ends on the ends of the tubes. The spring is thus supported on the dog d and exerts its force on the cam I to press said cam outward against the track b for the purpose aforesaid. To prevent said cam from marring the inner jamb A during the vertical movement of the sash to and from its open and closed positions I employ a metal strap t which is connected at its upper end to the upper tube k , and connect the lower end of said strap to the inner end of the lever e , preferably by a hook n on said lever inserted into an aperture in the strap. In operating the lever e to throw the dog d from engagement with the catch-plate a , the upper tube k is drawn down and caused to draw the cam I inward and free from the track b , in which position the cam remains until the lever e is released to allow the dog d to engage the catch-plate a . In the modification illustrated in Fig. 8 of the drawings, the strap t is connected at its upper end to the cam I and at its lower end to the periphery of a spool p attached to the shaft f . A short strap r connects the strap t to the dog d so that the cam I is drawn out of contact with the track b simultaneously with the thrust of the dog d from its engagement with the catch-plate a .

What I claim as my invention is:—

1. In combination with the casing, sash and catch-plates attached to the inner jamb, of an even track on said jamb, a dog movably connected to the sash and adapted to engage said catch-plates, a cam pivoted to the sash, means connecting the dog and cam for forcing the latter to bear on the aforesaid track, and means for moving the cam from the track by the movement of the dog from its locking position.

2. The combination with the casing and sash, of a series of catch-plates, an even track on the inner jamb, a sash-locking dog movably connected to the sash, a cam pivoted to the sash opposite the aforesaid

track, a spring supported on the dog and forcing the cam to the track, and a strap actuated simultaneously with the movement of the dog from its locking position and drawing the cam from the track.

3. The combination with the casing and sash, of a series of catch-plates and an even track on the inner jamb, a sash-locking dog pivoted to the sash to engage the catch-plates, a cam pivoted to the sash opposite the aforesaid track, tubes connected separately to the dog and cam at corresponding sides from the pivots thereof, a rod attached to one of said tubes and inserted slidably in the other tube, a spiral spring surrounding said rod and bearing on the ends of the tubes, and a longitudinally movable strap connected at one end to the tube of the cam and actuated by the movement of the dog from its locking position and drawing the cam from the aforesaid track.

4. The combination with the casing and sash, of catch-plates attached to the inner jamb and formed with upwardly projecting tongues, a spring-actuated sash-locking dog pivoted at one end to the sash and formed at its free end with a hook for engaging said tongues, and means engaging the pivoted end of the dog for throwing the same out of engagement.

5. The combination with the casing and sash, of catch-plates attached to the inner jamb and formed with tongues and bearing faces between said tongues, and a sash-locking dog pivoted at one end to the sash and formed at its free end with a hook for engaging the said tongues and with a shoulder on the latter end for engaging the bearing faces as set forth.

6. The combination with the casing and sash, of a sash-locking dog pivoted to the sash and formed with an outwardly projecting shoulder on the pivoted end thereof, a rock-shaft pivotally supported on the sash, and a two-armed lever fastened to said rock-shaft, one arm of the lever being disposed to engage the aforesaid shoulder, when the dog is in locking position, and the other arm operative for throwing the dog out of said position as set forth.

7. The combination with the casing and sash, of a sash-locking dog pivoted to the lower portion of the sash and formed with an outwardly projecting shoulder, a sash-tightening cam pivoted to the upper portion of the sash, vertical tubes connected separately to the dog and cam at corresponding sides from the pivots thereof, a rod attached to the lower of said tubes and inserted slidably in the upper tube, a spiral spring surrounding said rod and bearing on the ends of the tubes, a rock-shaft pivotally supported in the sash, a two-armed lever fastened to said rock-shaft and disposed to engage the shoulder of the dog, and a strap

connected at one end to the aforesaid lever and at the opposite end to the upper tube as and for the purpose set forth.

5 8. The combination with the casing having the inner jamb provided for a portion of its length with an even track, and the sash, of catches arranged in a vertical series extending from one end of the track partway the length of the jamb, a sash-locking dog
10 pivoted to the sash and adapted to engage the series of catches, a sash-tightening cam pivoted to the sash and adapted to bear on

the track, mechanism operatively connecting the dog and cam and comprising a pair of tubes disposed axially in line, a rod telescoping in said tubes, and a spiral-spring surrounding the rod and bearing with its ends on the ends of the tubes, and means on the sash for actuating said mechanism as set forth. 15

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Witnesses:

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