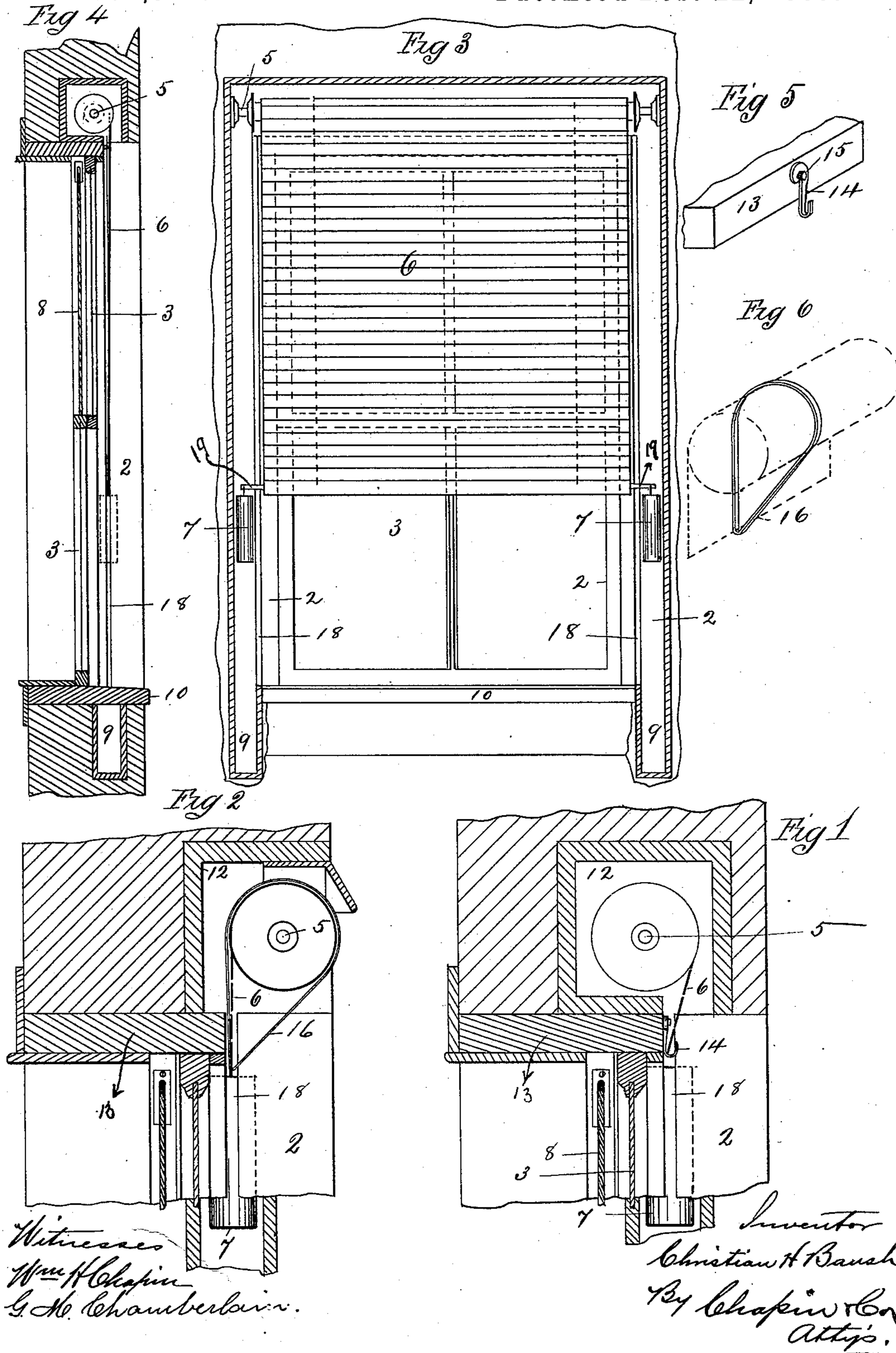


(No Model.)

C. H. BAUSH.
SHUTTER SUPPORT.

No. 358,324.

Patented Feb. 22, 1887.



UNITED STATES PATENT OFFICE.

CHRISTIAN H. BAUSH, OF HOLYOKE, MASSACHUSETTS.

SHUTTER-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 358,324, dated February 22, 1887.

Application filed October 25, 1886. Serial No. 217,198. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN H. BAUSH, a citizen of the United States, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Shutter-Supports, of which the following is a specification.

This invention relates to improvements in means for the utilization of rolling metallic or other vertically-operating shutters as a protection against fire, the object being to so secure shutters of the above-named classes in a rolled-up or lifted position above a window or door in a building that such an amount of heat from a fire in proximity to the latter as will injure a building shall cause a shutter to be dropped before said door or window automatically, thereby protecting the same from damage by said fire; and the invention consists in means for securing said shutters in a rolled or lifted up position, all as hereinafter fully described, and set forth in the claim.

In the drawings, forming part of this specification, Figure 1 is a transverse section of a portion of a building above the window thereof, showing a shutter-chamber therein and a revolving shutter in end view, having applied thereto devices embodying my invention, whereby the shutter is held in a rolled-up position, said view showing also a portion of the window below said chamber and one of the unrolling-weights attached to said shutter. Fig. 2 is a similar view to Fig. 1, but showing the shutter rolled up in a different direction from that shown in said last-named figure. Fig. 3 is a front elevation, partly in section, of a portion of a building adjoining the window and of the latter, and of a rolling shutter partly let down over the window. Fig. 4 is a vertical section of the parts illustrated in Fig. 3. Fig. 5 is a perspective view of a portion of the window-cap having attached thereto a shutter-supporting device. Fig. 6 is a perspective view illustrating, in dotted lines, a portion of the shutter in a rolled-up position and other means for so supporting it than those shown in Fig. 5.

In the drawings, 12 indicates a shutter-chamber constructed above a window or door of a building, in which a revolving shutter, 6, is hung on a rotating shaft, 5, in a well-known

manner, said rolling shutter embodying the usual construction and consisting of a series of metallic slats or thin bars hinged together, whereby the shutter is adapted to be rolled onto and unrolled from said shaft, and thereby be drawn down in front of a window or door and be rolled up by turning said shaft. The window-cap is indicated by 13 and the window-sill by 10, 2 indicating the vertical sides of the window-casing, in the rear of which are constructed wells or chambers in which weights 7 may move up and down, said vertical casings being provided each with a vertical slot, 18, through which extends an arm, 19, projecting laterally from each end of the lower slat of the shutter, as shown in Fig. 3, on which arms said weights 7 are hung, said weights serving as means for assisting in the quick unrolling and descent of the shutter from a rolled-up position to one which shall cause it to be fully unrolled before said window or door, the said unrolled position being partly shown in said Fig. 3. The said weight-chambers adjoining the sides 2 of the window-casing extend far enough below the window-sill 10 to receive, as at 9, Fig. 3, the weights 7 when the shutter is drawn down to entirely cover the window. The glass of the window is indicated by 3. 8 is the window-cord, attached in the usual way to the lower window-sash.

The shutter 6 is connected by its upper end to the rotating shaft 5, and the latter is revolved by any suitable means to roll the shutter thereon, to bring it to the position shown in Figs. 1 and 2—that is to say, with its lower end about opposite the edge of the window-cap 13—in which position the shutter is secured, suspending it and the weights 7, which are hung thereto, as described, by a hook, 14, which is attached by a pin, 15, to the front edge of the window-cap 13, or to other convenient part of the building near to the rear side of the shutter. The said supporting-hook 14 is constructed from fusible metal consisting of an alloy of lead, tin, bismuth, and cadmium in the proportions stated in the patent to Wood, March 20, 1860, or of any other suitable alloy of metals, the melting or fusing point of which is about 150° Fahrenheit, the object in holding up or supporting the shutter in a rolled-up position by a connection or attach-

ment capable of fusing at such a low degree of heat being to provide reliable means whereby said shutter shall be caused to unroll and drop down through the effect of any degree of heat which may be injurious to the building on which it is hung, thereby affording, by the automatic action of said shutter-support under heat, desirable protection from fire of such part or parts of a building as may be covered by said shutter. Fig. 1 illustrates said fusible-metal hook 14 in position at the upper end of the window in engagement with the lower end of the shutter 6, and the existence of any fire in such proximity to said window as will raise the temperature of said hook above the fusing-point of the aforesaid metal of which it is made will cause it to be melted, thereby removing all support for the shutter and permitting it to be unrolled and drawn down by the said weights which are attached thereto. Fig. 2 illustrates the shutter 6 hung on said shaft 5, so as to be rolled up in the reverse direction to that shown in Fig. 1, whereby the shutter is rolled and unrolled in a line substantially parallel with the window. In said Fig. 2 is illustrated another means of holding the shutter in a rolled-up position—viz., by a band, 16, of said fusible metal, or of any other material which is fusible under about the degree of heat above set forth. Said band 16 is, as shown in Figs. 2 and 6, passed over the rolled-up shutter and under the lower end of

the latter, and its ends are united by soldering, or in any other suitable manner.

It is obvious that the shutter roller or shaft 5 may be located high enough above the window to permit so much of the shutter to be held in a normally unrolled position that the said pending unrolled portion thereof would constitute sufficient weight to cause the shutter to be unrolled when its lower end should be freed from any supporting object, as above set forth, and thus the weights 7 may be dispensed with; and, furthermore, it is easily understood that the use of the above-described fusible supports is not necessarily limited to rolling shutters; but said supports may with equal advantage be used with any shutters capable of being lifted and dropped substantially as are those hereinbefore described.

What I claim as my invention is—

The combination, with a shutter, substantially as described, capable of dropping down before a part of a building, of means for holding up said shutter, consisting of a hook made of fusible metal, substantially as described, attached to the building near the shutter and engaging with the latter, substantially as set forth.

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Witnesses:

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H. A. CHAPIN.