(No Model.)

G. H. SPRING.

SASH HOLDER.

No. 441,596. Patented Nov. 25, 1890.

Fig. 1.

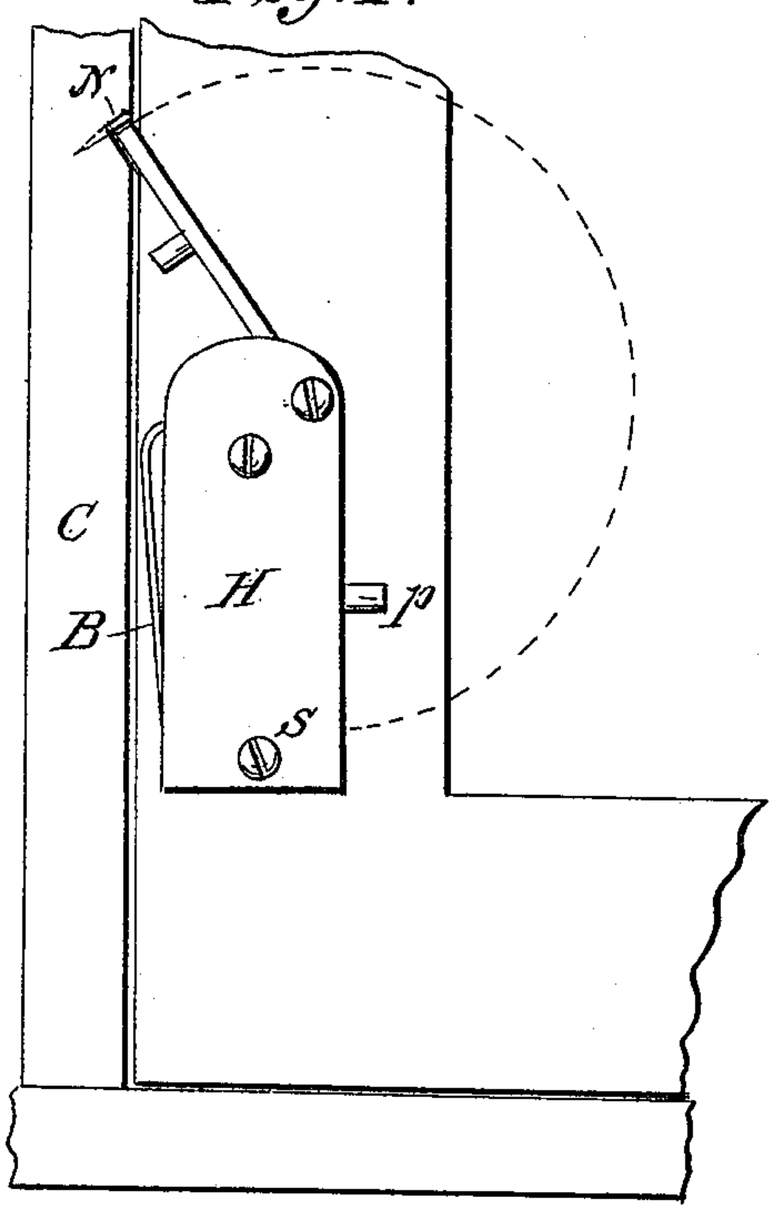


Fig. 2.

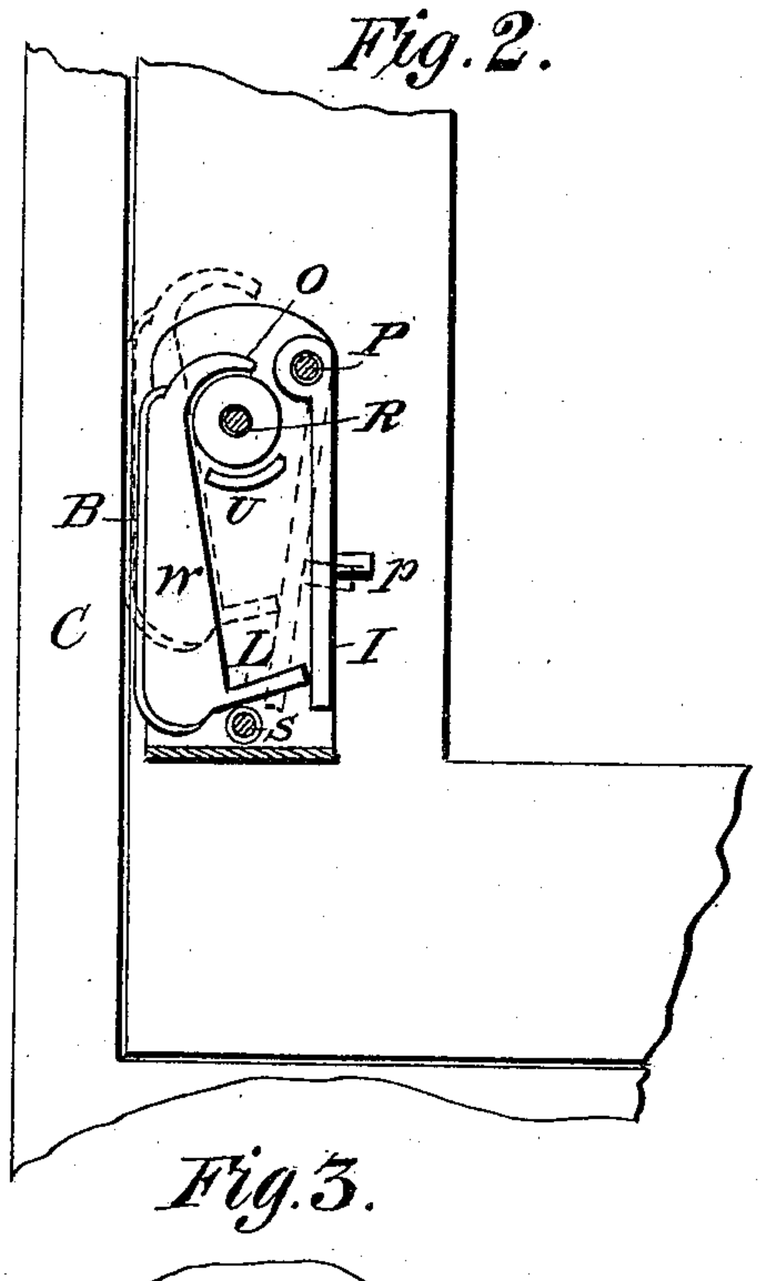


Fig. 3.

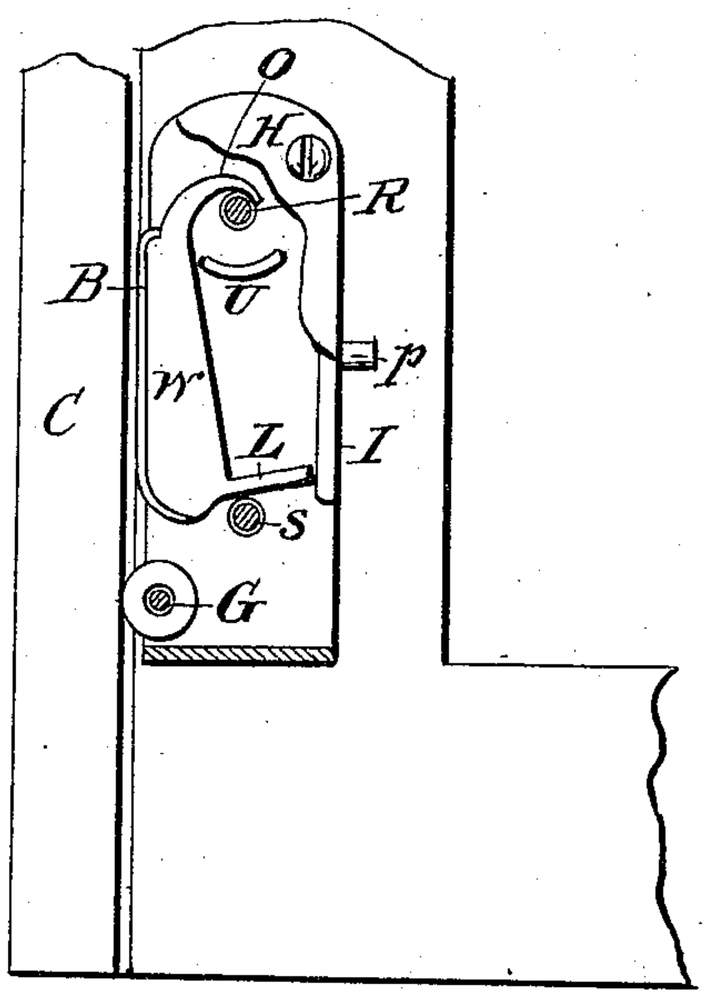
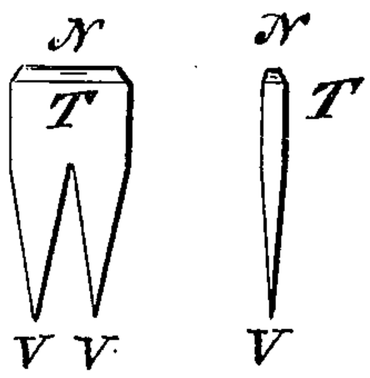


Fig. 4.



WITNESSES:

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SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 441,596, dated November 25, 1890.

Application filed November 30, 1889. Serial No. 332,115. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HOPKINS SPRING, a citizen of the United States, residing at Lemars, in the county of Plymouth and State of Iowa, have invented certain new and useful Improvements in Sash Holders and Fasteners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of constructions provided to fasten and lock sash in raised and lowered relations in their casements, and is designed to afford a device symmetrical in form and reliable in service for well and for poorly fitted sash, being adapted to harmless service with related parts, while convenient in use for the purposes to which it is designed. It consists, essentially, in a pendent oblong wedge attached to the side stile of a raised sash, adapted to slide up and down in its casement, and a stop, such as a pivot and roller, or with a stationary pin alone, for sash-fastening purposes, which projects its narrow end upwardly between the roller or pin and the nearest part of the casement to it, the lower under part of the wedge projecting outwardly beneath the roller or pin, it having as a facing feature a smooth band attached to shield parts of the casing from injurious pressure in its use; also, in means in part connected with the wedge by which to suspend it in the position indicated, though with its lower part tending by its weight to hang away from the casing to avoid undesired automatic fastening of the sash when being lowered; in means to limit the inward movement or swing of the wedge and that of another attachment (besides it) to advantage, and in means to move and sustain the pendent wedge by hand-pressure sidewise against the nearest stationary casing of the sash, when the parts of the invention are incased, (which service may be accomplished directly by hand-pressure when they are not incased,) to make the wedge practically for the time a stationary feature of the casing to permit the stop, as the said roller, or, if so used, the round pin attached to the sash, to move freely down on the outwardly-beveled side of the wedge, making it a wedging key in its situation to easily and securely fasten the sash up in its casement; also, in a pendent pivoted lever and locking-brace adapted as means to press the incased wedging-key into its casing in the sash-fastening service, and also to be turned upwardly above its pivot, so as to lean at the limit of its upward-turning circuit against the nearest casing or stop of the sash as formed to receive it, so as to brace against it, or a metal attachment or strike provided for the purpose, to lock the sash securely when down; also, in a metal case, as shown, to shield the combined mechanism of the invention from sight and to strengthen and hold in good working relations with each other its various movable and stationary parts; also, a fending-roller attached to the metal casing or in like relations upon the sash, adapted to limit the side motion of a loosely-fitted sash and shield from injurious contact the face parts of the metal casing and the stationary casing of the sash and to secure the advantages of the invention thus to such poorly-fitted sash. The details of this invention and reference to its scope and general design are more fully given in the annexed specification, illustrated by accompanying drawings, so that any one skilled in the art can readily understand and reproduce them.

In the drawings, Figure 1 is a front view showing the application of the invention. Fig. 2 is a view similar to Fig. 1, the front of the case being removed and showing the operation of the wedge by dotted lines. Fig. 3 is a view, parts being broken away, of a modification. Fig. 4 is an elevation of the strike.

The wedging-key W may be made of any substantial material, such as wood and the like; but I choose metal—such as iron or brass, preferably—because by its use I can better balance the wedge, so that it will hang (at least in its lower part) rather away from the window-stop, thus diminishing its tendency to disappointingly fasten the sash when being lowered, and the liability to this is corrected by attaching to the face-plate of wedge W a band B of smooth leather, as of sheepskin. As means to suspend the wedging-key

W, I provide a metal curved band O, attached to the upper narrow part of the key, formed to fit or hang upon the stop R, which may be either a pin or a pin provided with a roller. The wedging-key being oblong gives quite a margin for supporting sash that have a slight side motion in their casings; but for sash that have so much side play as to require it I have provided, as shown in Fig. 3, a fending-roller G, designed to measure or limit the side motion of such a window, so that my fastener can be set near enough to the side stop to have the full benefit of all the enlarging taper of the wedge without bringing its face parts into injurious contact with the window-stop. This gives, besides, more steadiness of action to the sash as it is raised and lowered, and, as I have indicated, I provide in this way for the secure fastening of the most loosely-fitted sash, as well as of others that are better adjusted in their casements. I make this fending-roller, preferably, of sole-leather, as being durable and otherwise well adapted to its service. Obviously, other suitable material can be used with equal advantage. The lower and thicker portion of the pendent wedge serves as a basis of pressure by which it can be pressed and held initially against the window-stop by direct hand-pressure when used without a metal casing, and a lateral projection L from its base serves the same purpose when incased, as referred to later herein. The locking-brace I has a perforation in its upper end, by which it is supported pendently upon a pivot P, and when used in connection with the metal casing H it hangs pendantly within it, practically filling its open side, though by its weight adapted to incline inwardly at the bottom, as the wedge does on the other side. As means to limit the inward inclination of these parts and yet to hold them in the best position for ready service, I provide a screw S, which serves also in fastening case H to the sash. This screw S is set where wedge W can touch against it and hang slightly inclined below, so as to avoid undesired automatic fastening of the sash when lowering, and projection L is adapted to extend sufficiently far from wedge W to hold brace I in a perpendicular position, thus limiting its inward tendency, wedge W being heavier than brace I. The benefit of brace I as it relates to fastening raised sash consists in its being adapted to be pressed upon on its exposed side and pushed into the metal casing H, and, through projection L, presses and supports wedge W against window-stop C, permitting the service of stop R in fastening the sash. For convenience of operation a thumb-knob *p* is provided on the side of the brace I for the finger or thumb to obtain a purchase on when it is required to lock the sash or hold the wedge in a stationary position relative to the sash when the latter is lowering. The further use of the brace I is in the locking service, which its name implies. This locking service is required when the sash is down and is effected by turning the brace, which is reversible, upwardly and over against window-stop C, as indicated in Fig. 1, where it locks bracingly against a metal strike N, which is driven obliquely into stop C and flush with its surface, a slight beveled recess being made from stop C below it, being thus adapted to its contact in reception there and to its ready release when turned outwardly to resume its pendent position by gravity in the side of H. The metal strike N prevents all contact of the outer end of the brace I with the wood-work, thus completing the locking of the sash in a substantial manner, so that it cannot be raised by outside parties.

The double service of brace I ought to be appreciated, and the fact also that after its work is done it retires quite out of sight, except as it adds to the appearance of the case H, filling and closing its otherwise open side.

The metal case H is oblong in its general form, having an oval-shaped top. It is formed of one piece of metal, so as to be closed at its lower end, and preferably open at its top and side edges for the free use of the wedge and the locking-brace, and having its front and back plates perforated alike, adapting it to be fastened on the right or left side of the sash, as may be preferred by the user. As means for the end designed, I have provided a spacing-bar U, attached to one of the plates to hold the front and back plates of case H sufficiently apart, so that the movable parts of the invention—such as the pendent wedge W, the pendent brace I, and the anti-friction roller R—may move freely between them. As thus formed, the case H is adapted to shield from the sight, to strengthen in use, and to hold in good working relations to each other the various stationary and working parts of the invention, and to form thus a sightly and acceptable attachment to the sash for the joint purposes that it serves.

The metal strike N has a flat oblong top border T, adapting it to serve as a full-width rest or bracing-point for the contact of brace I in locking the sash, and also, as referred to later, for the contact of wedge W in fastening it open when a round pin is substituted for roller R, as it may be in this service, as it effects practically the same end. The strike N has also two flat tapering points V V, extending below its border T, by which it can be secured readily and firmly on the side casing or window-stop without the use of screws, being well adapted in its form and mode of setting for its designed uses with the parts mentioned and to permit their ready release after service.

In the drawings the invention is shown in incased form; but in the line of economy it may be used unincased, or, if preferred, with a partial face-plate only. In either case projection L and thumb-knob P could be omitted from the construction, and stationary screws or pins could limit the inward tendency of

brace I and wedge W, and wedge W could be pressed against stop C directly by hand or finger touch.

While I show an oblong wedge pressed into service by a lever I, pivoted at one end, I may (in a metal case as long as represented in Fig. 3) use a shorter lever pivoted in an eccentric manner for the purpose, and the oblong wedge may be varied in its form in some minor particular, as, for instance, in the substitution in the place of the metal band B of a flexible band attached to a stationary pin above R.

While my invention is illustrated showing my oblong wedge suspended so as to be pressed and held initially in a stationary manner by hand-pressure against the side casing or window-stop, to be fastened there by side pressure from one round roller on a stationary pin, it is obvious that by the use of a series of my strikes driven so as to project slightly at intervals from the side casing or window-stop, so that the wedge, when pressed sidewise, could engage or rest on any one of them, one round stationary pin can be used in the place of the roller, if preferred, to fasten the sash open in connection with the lower sash when raised or the upper sash when lowered.

In an unincased form my sash-fastener may be used in the lower corner of a lower sash by a mortise-opening being made there for it in the edge of the sash, such as will permit the wedge W to be moved sidewise by thumb or finger pressure after the sash is raised, in which method of use the brace I could be pivoted separately on the stile for its reversible locking service; but I choose, preferably, to attach my device, whether for use on upper or lower sash, upon the stile of the sash.

I do not limit myself to the exact details of the various features of its construction as shown or in the use of the precise means shown as employed to effect the ends specified, as other and similar means and devices may be used consistently with the design and scope of this invention to accomplish the same results.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A sash-fastener to be attached to a sash in its casement, composed of a wedge suspended at its narrow end and normally held from contact with the casement, whereby the sash can be moved up or down freely in its casement, said wedge being susceptible of lateral motion, whereby it can be brought in contact with the casement to hold the sash in the required position, and a stop for the wedge to bind against when fastening the sash, substantially as set forth.

2. The combination, with the pendent wedge, of the pendent locking-brace adapted to engage with and limited in its inward movement by the said wedge and adapted to be turned up against the window stop or casement, substantially as described.

3. A sash fastener and holder comprising a metal holding-case attached to a sash in its casement near one of its side casings, having its top and sides open and having an oblong wedging-key suspended within it, so that its upper narrow end projects upwardly between a stop and the side casing or window-stop near it to press the wedging-key against the side casing or window-stop when the sash is lowering, and having within it on the opposite side from the wedging-key a pendent pivoted locking-brace which can be turned above its pivot to touch bracingly against the near window-stop, and a metal attachment thereon to lock the sash when down, to shield these fastening and locking parts from sight, and to strengthen and hold them in good working relation with each other, substantially as set forth, and for the purposes described.

4. A pendent oblong wedging device adapted to fasten a sash up and a pendent locking-brace adapted to lock a sash down, attached to the side stile of a sash in its casement near each other, having an anti-friction roller between their upper ends to aid in the sash-fastening service, each by gravity inclining inwardly below the roller, in combination with intervening means to limit this tendency, so as to keep each in its required position for ready service, to fasten the sash when raised, and to lock the sash when down, substantially as set forth, and for the purposes mentioned.

5. An oblong reversible locking-brace perforated at one end and attached by a stationary pin or pivot to the side stile of a sash in its casement, so as to hang pendently upon it, having a short pin projecting from its lower part toward the body of the sash as a point of pressure by which to move it against a pendent oblong wedging-key between it and the casing to effect wedging support of the raised sash, being adapted also to be turned upwardly above its pivot, so as to lean at the limit of its upward turning circuit against the nearest casing of the sash as formed to receive it, so as to brace against it or a metal attachment thereto to lock the sash securely when down, substantially as set forth, and for the purposes indicated.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE HOPKINS SPRING.

Witnesses:

GEORGE H. HEWES,

ROBERT A. BELL.