G. H. EARNEST.
Sash-Holder.

No. 204,659. Patented June 11, 1878.

Fig. 2.

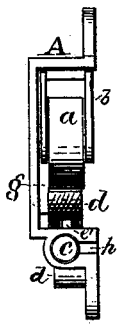
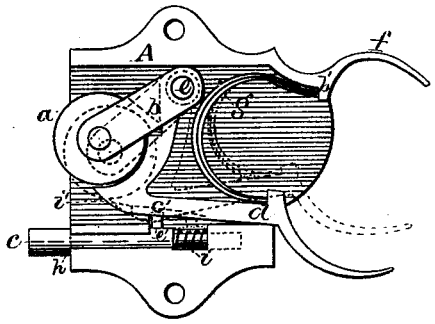


Fig. 1.



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GEORGE H. EARNEST, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN SASH-HOLDERS.

Specification forming part of Letters Patent No. **204,659**, dated June 11, 1878; application filed April 4, 1878.

To all whom it may concern:

Be it known that I, GEORGE H. EARNEST, of the city of Springfield, in the county of Clarke and State of Ohio, have invented cer tain new and useful Improvements in Sash-Holders; and I hereby declare that the following specification contains a full, clear, concise, and exact description of my invention, reference being had to the accompanying drawings, which are a part of the same.

My invention relates to a sash holder and lock combined, the former, however, having certain operative functions independent of the latter, whereby the sash is temporarily retained at any point, while the latter allows it to be locked only when in position to be permanently secured.

My invention has for its object a sash-holder which can be readily applied without removing the sash from the window or cutting away any portion of the same; which forces the sash against the opposite side of the window, thus preserving its parallelism and preventing it from rattling whether raised or lowered, as it exerts a constant pressure; also, which will allow the window to be raised (when the locking-bolt is retracted) without manipulating the springs, and which is certain, effective, and reliable, not subject to injury from wear, and having in its combination a locking-bolt operated by the same lever with the holder, but relieved from the direct weight of the sash by the latter, but which is not operated upon by said lever or dog until it has reached the latter half of its throw. It is designed for any kind of vertical sliding sash in either buildings or cars.

Figure 1 is a reverse or inside view of my improved sash-holder. The dotted lines show the position of its operative parts when shifted. Fig. 2 is a front-end view of the same.

A is the body-plate, which is cast with a hollow or recess for the operative parts, and flanges with holes for its attachment to the sash, it being designed to be screwed upon the frame of the sash on one side of the window, so that the roller *a* of its holder will have its bearing upon the retaining-strip. This wheel is journaled in the forward end of the inclined link *b*, which latter is pivoted by its upper end to the fixed post *e*, projecting inward from the plate. The dog *d*, which operates as both lever and friction-brake against the wheel *a*, is pivoted to the same post inside of the link *b*. This link is made of a solid piece of metal, with portions cut out between the bearing-points (leaving a small triangular division-piece between its two pivoted ends connecting its side bars) to allow room for the dog *d* to operate against wheel *a*. The front of *d* is cut out to fit the curve of the wheel, the face of which, to a certain extent, rests upon it, so that it forms a complete brake as well as lever for operating it.

The lower arm of the dog rests upon the rear end of the bolt-case at the bottom of the recess in the main plate. It is extended beyond the rear of the latter and formed into a trigger-shaped handle opposite to a fixed handle, *f*, (of reversed form) on the plate above it. These two handles are grasped at the same time by the hand in operating both holder and locking-bolt *c*. The pressure of resistance upon the holder is obtained by a semicircular or U shaped spring, *g*, the upper end of which has a bearing in a notch or shoulder, *b'*, formed in the plate at the base of handle *f*, while its lower end rests in a similar notch on the top of the lower limb of dog *d* opposite to it. The bend of the spring extends inward to near the middle of the plate, it being laid in edgewise. This spring is a cumulative one, composed of a number of pieces of thin flat steel. The required amount of pressure is obtained by adding to the number. These pieces are one by one bent into shape from straight strips of equal length, and inserted edgewise into the position shown. They form together a spring of great power, capable of acting on the dog *d* and roller *a* under all circumstances in a perfect manner. They are, moreover, not subject to danger of breakage, as in a single piece, and even if one section should break the spring would still be operative.

Below the mechanism of the holder is a locking-bolt, *c*, inclosed in a case formed in the plate at its lower edge. It is provided with a spiral spring, *i*, for keeping it extended, and a stud, *c'*, on its top side, which extends up into a recess, *c'*, formed by a flange on the lower edge of the dog, as seen in dotted lines, so that after the handle of *d* is raised to a certain

height, sufficient to release the pressure of *a* upon the strip, this stud is caught by the shoulder *i'*, at the front end of *c'*, and the bolt *c* is drawn back or unlocked from the hole in the strip or casing in which it may be inserted, and the sash raised. The bolt, of course, remains retracted while the sash is being raised, the holder exerting sufficient pressure to hold it up at any point in the rim. The hole for the bolt is placed at the bottom of the strip, or at such point as is required for permanent security.

A slot, *h*, is cut out or cast in the bolt-case, for introducing the bolt, with its stud *e'*, into place.

A segment or shoe could be used in place of the roller *a;* but the latter is preferred, as being capable of rotation, and of allowing the sash to be raised without releasing it from the pressure of the spring *g* and dog *d*. Besides this it offers less frictional resistance, and its pressure is more equable.

The operation of the device can be readily understood by the drawings, the dotted lines exhibiting the movement of its parts.

I am aware that rollers both smooth and milled have been used in sash-holders, and that bolts and spiral springs have also been used, and I do not claim these as my invention.

I claim—

1. The combination, in a sash-holder, of a roller, *a*, pivoted in the free end of a suspended link, *b*, operated by a curved-faced dog or brake, *d*, pivoted within said link to the same post, *e*, held by a pressure-spring, *g*, and having its lower edge provided with a recess, *c'*, and shoulder *i'*, for catching the stud *e'* of a locking-bolt, *c*, and retracting the same by a continuous movement of said dog after releasing its pressure upon the roller, as described.

2. In a sash-holder, a friction-brake or dog, *d*, pivoted to the same post, *e*, with the link *b*, having a roller, *a*, or its equivalent, operated by said brake or dog, in combination with a pressure-spring, *g*, as and for the purpose hereinbefore set forth.

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