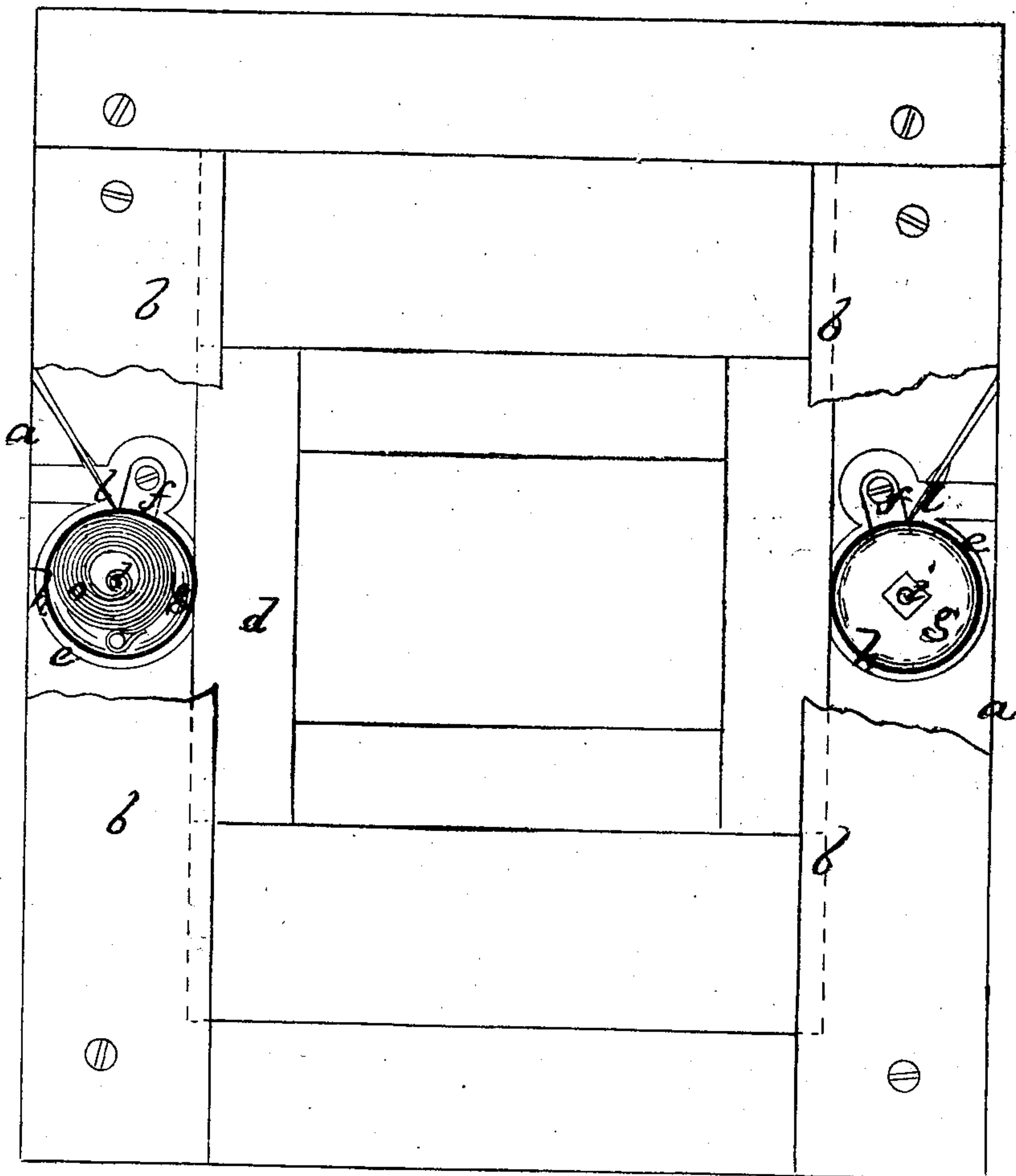


PATENTED

Philipp Wenzel's MAR 3 1868
Imp't in Supporting Window Sashes.

75226



Witnesses.
J. B. Kidder
Ab. W. Frothingham.

P. Wenzel by
Crosby, Halsted & Pomeroy
Attys

United States Patent Office.

PHILIPP WENZEL, OF MENTZ, GERMANY, ASSIGNOR TO H. C. LAUTERBACK,
OF ROXBURY, MASSACHUSETTS.

Letters Patent No. 75,226, dated March 3, 1868.

IMPROVED WINDOW-SASH SUPPORTER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, PHILIPP WENZEL, a citizen of the United States, temporarily residing at the city of Mentz, Germany, have invented an Improvement in Supporting Window-Sashes; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practise it.

The invention relates to a method of supporting window-sashes without the aid of counterbalance-weights, and consists in the employment of spring-cylinders or rollers upon one or both edges of the sash, the peripheral surface of each roll being preferably covered with rubber or other elastic material, and each roller being pressed against the sash by a spring, and being hung upon an arbor to which it is connected by a coiled spring, the roll being wound upon the arbor against the stress of the spring, in such manner, that when the sash is put into its casing, the tendency of the spring to rotate the roll creates a stress upon the sash tending to throw it upwards.

The drawing represents a view of a window-frame and a sash with my invention applied thereto, the face-heads being broken away sufficiently to show the sash-supporting mechanism.

a denotes the window-frame; *bb*, the beads, which confine the sash *d* in place, and form guides or ways against which it runs. Mortising down into each side-post of the frame a recess, *e*, I hang therein, on a swing-plate, *f*, a spring-barrel or roll, *g*, the outer or peripheral surface of which I cover with rubber or other elastic material *h*. Each roll is immediately hung and turns on an axis or stem, *i*, projecting from the plate *f*, and within or upon one face of the roll I place a coiled spring, *o*, one end of which is fixed to the roll and the other end to the axis *i*, so that when the roll is turned in one direction, the spring is compressed, the stress of the spring then tending to turn it in the opposite direction. Each bearing or swing-plate *f* is hung loosely on a pin, *k*, and a spring, *l*, throws each roll up against the edge of the sash, the stress upon the opposite rolls, (when two are used,) tending to keep the opposite edges of the sash from binding in the frame when the sash is thrown up or down.

When the sash is to be inserted in the frame, the beads *bb* are first removed. Each roll *g* is then turned in a direction to compress its spring, and the sash with the springs so compressed is then sprung into place in the frame *a*, the springs being wound more or less, in accordance with the weight of the sash, or the ease with which it is desirable to raise or lower it.

It will now be seen that when the sash is raised, the stress of the springs tending to turn the rolls, aids the power of the person to overcome the weight of the sash, and that this stress is easily made sufficient, in connection with the inward pressure of the rolls by the springs *o*, to maintain the sash at any requisite height.

It will be obvious that only one spring-roll, or more than two, may be used in connection with one sash, though I consider the use of two, as shown and described, to be the best arrangement.

It will also be obvious that the rolls may be applied to an upper or drop-sash, as well as to a lower one, the springs being then so arranged as to tend to keep the sash closed or to aid in closing it.

Instead of smooth or friction-surfaced rolls, serrated or toothed wheels may be used in connection with serrations or teeth upon the edges of the sash, the springs being arranged substantially as described.

By an arrangement of spring-rolls, as shown and described, the sash is supported much more cheaply than by the use of weights, is much more easily raised and lowered, and applied to and removed from the window-frame, and is also less liable to get out of order.

(On one side of the drawing, the spring-roll is shown in elevation, and on the other side, the roll is represented as having its head removed, to show the coiled spring.)

I claim the employment of a presser-roll or rolls, containing a spring or springs, the stress of which tends to turn the roll and to raise or support the sash, substantially as set forth.

PHILIPP WENZEL.

Witnesses:

FRANCIS GOULD,
J. B. CROSBY.