

(No Model.)

Z. PINARD, Dec'd.

J. KLIPPEL, Administrator.

COMBINED BALANCED WINDOW SASH AND SCREEN.

No. 512,624.

Patented Jan. 9, 1894.

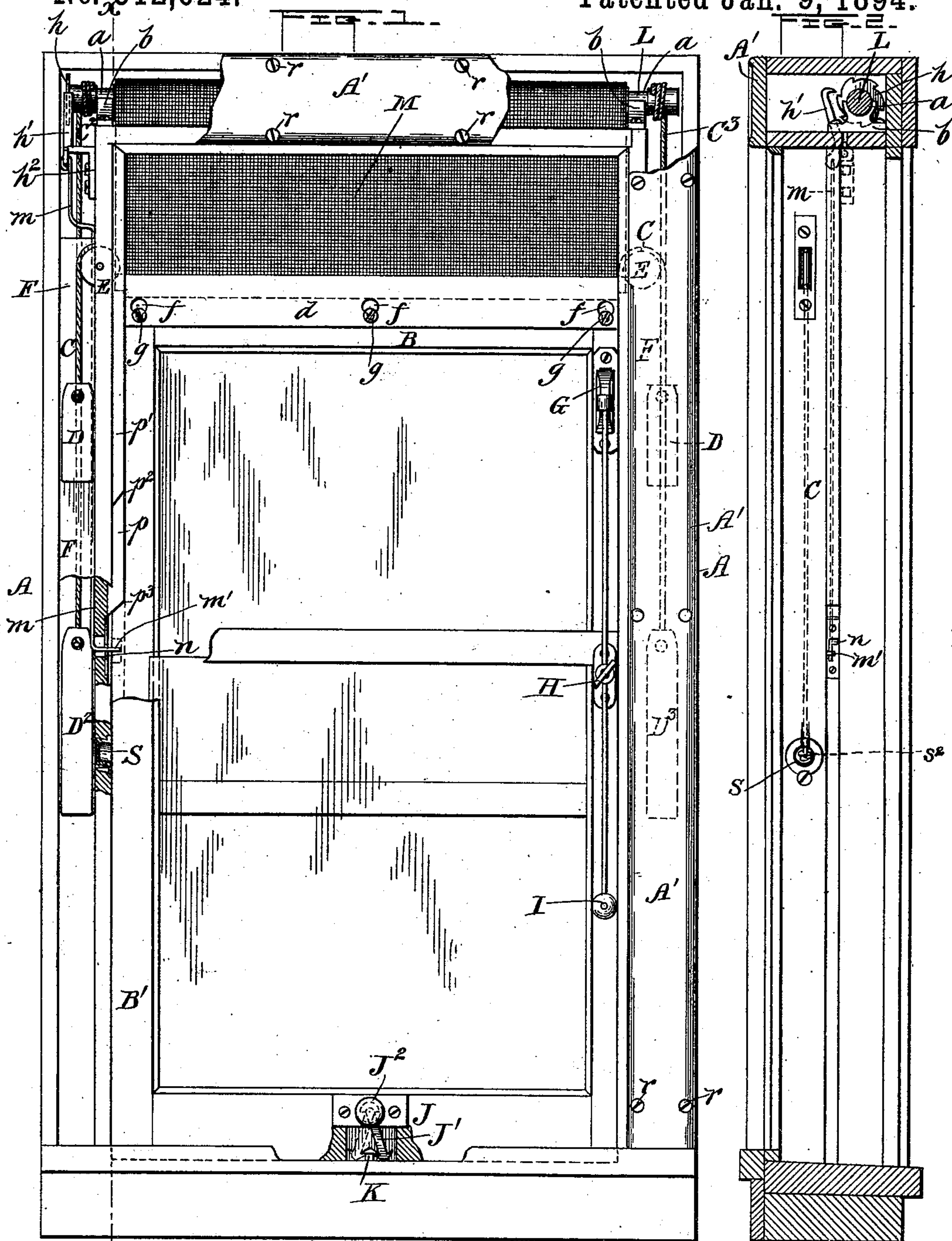


FIG. 1.

FIG. 2.

Attestance.  
J. C. French

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Zatigue Pinard  
by his Attorneys  
Mason, Fenwick and Lawrence



# UNITED STATES PATENT OFFICE.

ZATIQUÉ PINARD, OF PORTLAND, OREGON; JACOB KLIPPEL ADMINISTRATOR  
OF SAID PINARD, DECEASED.

## COMBINED BALANCED WINDOW SASH AND SCREEN.

SPECIFICATION forming part of Letters Patent No. 512,624, dated January 9, 1894.

Application filed June 29, 1891. Renewed May 23, 1893. Serial No. 475,278. (No model.)

*To all whom it may concern:*

Be it known that I, ZATIQUÉ PINARD, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in a Combined Balanced Window Sash and Screen; and I do hereby 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.

My invention relates to combined balanced window sashes and screens, wherein the screens unroll and roll-up, as the sash, to which the screen is connected, is operated, and it consists in certain constructions, combinations and arrangements of parts in combined balanced window sashes and screens, whereby the screen for keeping out insects can be retained at any point in its unrolled condition, either when connected to a sash or disconnected therefrom, while at the same time ready access is afforded to the working parts and provision made for conveniently connecting the screen to and disconnecting it from the sash and also a tight fit made between the wire screen and the metal plate at its lower edge.

In the accompanying drawings, Figure 1 is a front view of a window frame with my improved combined balanced window sashes, roller-screen, and other novel features of construction,—portions of the frame, one of the side confining beads and vertical parting strips being removed or broken away to expose hidden parts. Fig. 2 is a vertical section through the frame on the line *x, x* and looking toward the inner side of the frame; the screen-roller being shown unlocked, the sashes being removed, and the lower sash cord confined by its lower knotted end in a slotted metallic socket of the frame. Fig. 3 is a detail cross sectional view of the screen, roller, its ratchet wheel, and part of the screen; and Fig. 4 is a detail sectional view at right angles to the face of the screen, showing a portion of the wire or other netting, the clamping plate at the lower end of the same and the felt or other analogous packing strip.

The frame A is adapted for the application

to it of sashes B B', one of which is balanced as usual by the cords C, C and weights D, D applied in the ordinary manner on pulleys E, E, and in boxes F, F of the frame.

I have represented at G, H, I a sash adjusting and holding mechanism heretofore patented to me, the same bearing date September 23, 1891, and numbered 436,841, but the same forms no part of my present invention.

In the window frame A, at a point above and in rear of the upper sash, a roller L is applied, so that its reduced journal ends *a* extend into the spaces provided for the movement of balancing weights as shown. This roller is mounted in bearings *b* of the frame, and between these bearings a fine flexible wire or net work screen M, for excluding insects while admitting air, is applied, and the same is as wide as the window sash. This screen is fastened to the roller by tacks *c* or other suitable means, as illustrated in Fig. 3, and it rolls up on the roller, and unrolls therefrom as the sash is raised or lowered. The lower end of this screen is attached to a metal plate *d*; and between a rear clamping lip of this plate, felt or other packing material may be applied in order to make a close and firm fit between the metal and the netting, and prevent breaking out of the netting. The strip *d* is provided with a series of connecting slots *f*, said slots being of oblong shape, and reduced in diameter at their lower portions, as shown. By means of these slots the free end of the screen can be connected to headed pins *g* set into the upper cross piece of the upper sash. By pulling the screen down far enough to bring the enlarged parts of the slot in coincidence with the heads of the pins, and then pressing the plate *d* of the screen backward over the pins a connection is effected between the screen and the sash, whereupon the screen by a slight movement upward gets out of coincidence with the heads of the pins, and the pins occupy a position opposite the reduced lower portions of the slots, and thus separation of the sash and screen by a forward or outward movement is prevented.

For turning the screen-roller and also balancing the upper sash when the screen is con-



nected to it, the cords  $C^2$   $C^3$  and weights  $D^2$ ,  $D^3$  are connected to the extended ends of the roller  $L$ , and said cords wind upon said extended ends as illustrated in the drawings.

5 For holding the screen and sash at any desired position, a ratchet wheel  $h$  and a vibrating pawl  $h'$  are provided at one end of the roller, the pawl being fastened to a bracket  $h^2$  of the frame  $A$ , and the ratchet to a journal end of the roller. To the lever end of the  
10 pawl a bent rod  $m$  is connected. This rod extends down to about the top of the lower sash and its angular end  $m'$  passes through a bayonet shaped slot  $n$ , so that it can be manipulated with the hand, on the inside of the  
15 frame, when the lower portion of the divided vertical parting strip  $p$  is removed. By pushing the rod up the pawl is made to engage with the ratchet and lock the roller, and by  
20 moving its angular end into the horizontal portion of the bayonet slot it will be retained in this condition as long as desired. This locking device is especially useful for preventing the free end of the screen, when dis-  
25 connected from the sash and the sash is removed for any purpose, passing beyond the upper edge of the sash, and thus out of convenient reach when needed. As both the screen and upper sash are balanced together,  
30 the weights  $D^2$ ,  $D^3$  are made much heavier than those applied to the lower sash. When the screen is not connected with the sash and the sash thus not balanced by the weights, the device  $G$ ,  $H$ ,  $I$  may be brought into use  
35 for adjusting and holding the upper sash in the same manner as in my aforesaid Letters Patent dated September 23, 1891, and numbered 436,841.

In order to afford ready access to the work-

ing parts of the screen and sash operating 40 mechanism, the sash retaining strip  $p'$  and the vertical parting strip  $p$  on one side of the frame are divided respectively into two parts on oblique lines as indicated at  $p^2$ ,  $p^3$ , and the  
45 finishing moldings  $A'$  of the frame are fastened in position by means of screws  $r$ , as shown. With this construction, portions of the strips mentioned, and of the moldings, can be removed so as to expose or allow access  
50 to the operating parts.

What I claim as my invention is—

1. The roller carrying a screen and balanced by cords and weights, provided with a ratchet wheel and a pawl, and bent rod  $m$  connected to the pawl and extended down to  
55 about the middle of the height of the window frame and having angular ends  $m'$ , and the same passed through a bayonet slot of the frame to a position to be manipulated by the hand for operating said pawl, substantially  
60 as described.

2. The combination of the roller, screen, balancing weights and cords, ratchet, pawl controlling bent rod  $m$  connected to the pawl and extended down to about the middle of the  
65 height of the window frame, and having an angular end  $m'$ , and the same passed through a bayonet slot of the frame to a position to be manipulated by hand, and the upper sash of a window; the screen being connected to the  
70 sash so as to be, at will, readily disconnected therefrom, substantially as described.

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

ZATIQUÉ PINARD.

Witnesses:

J. C. RUTENIC,  
A. J. VANTINE.