

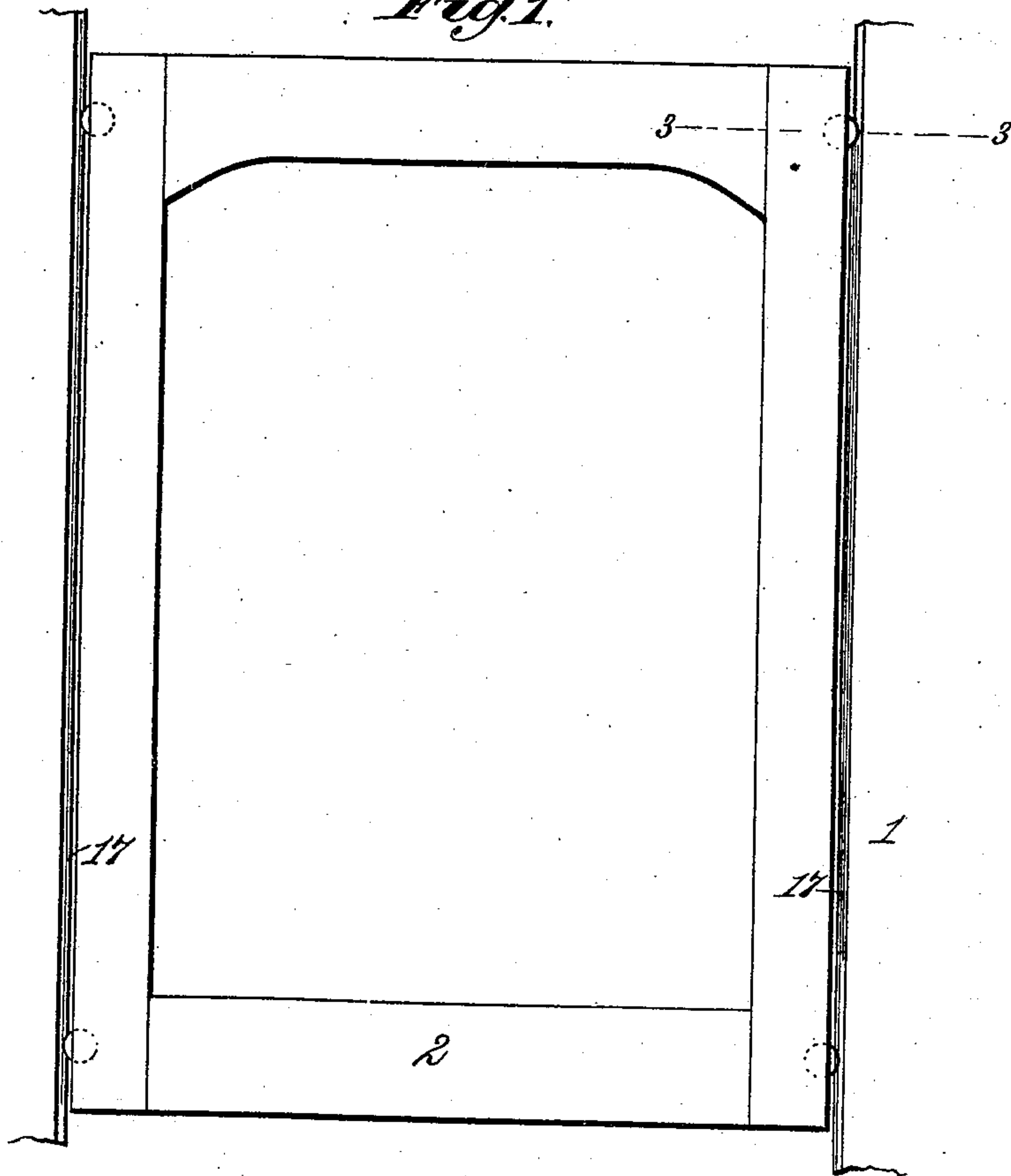
(No Model.)

P. S. RIDDELLE.  
SASH HOLDER.

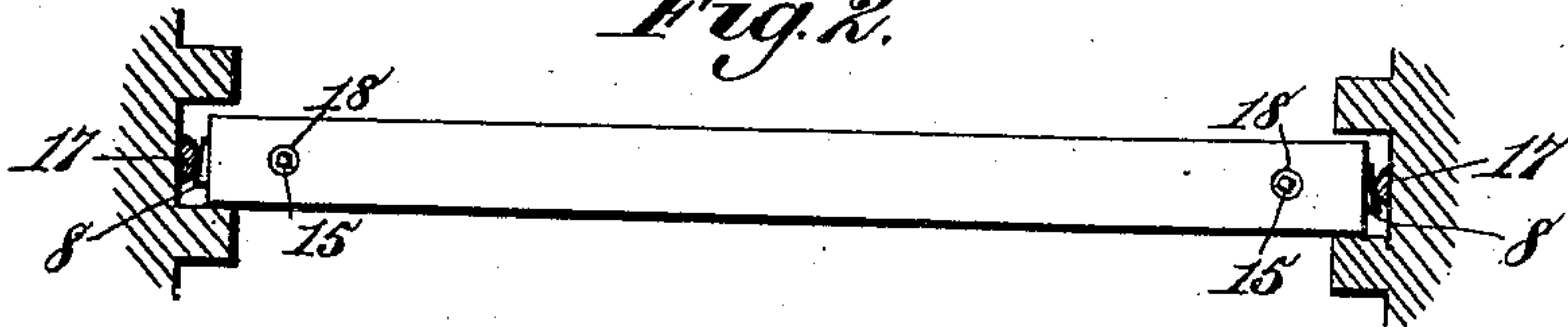
No. 501,809.

Patented July 18, 1893.

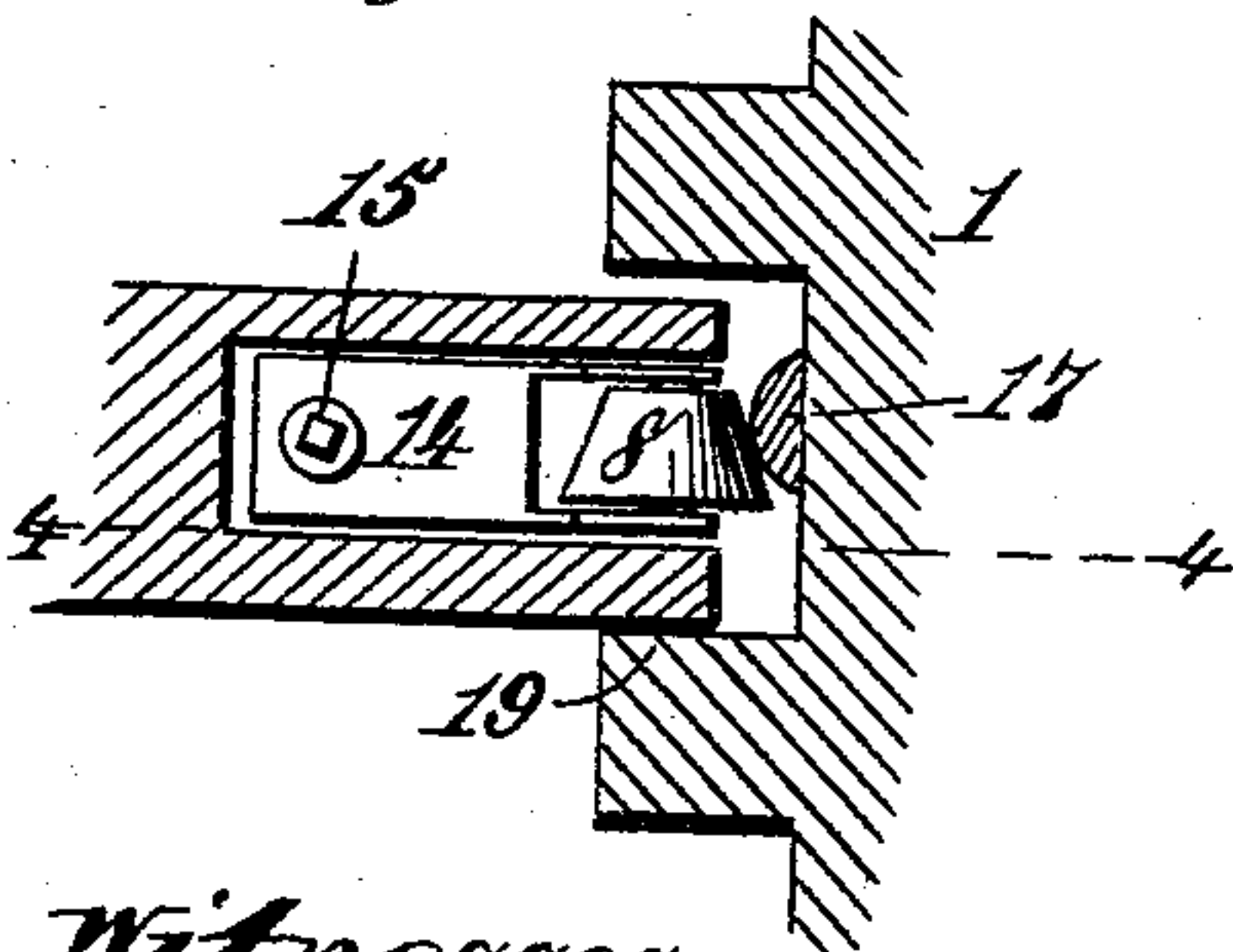
*Fig. 1.*



*Fig. 2.*

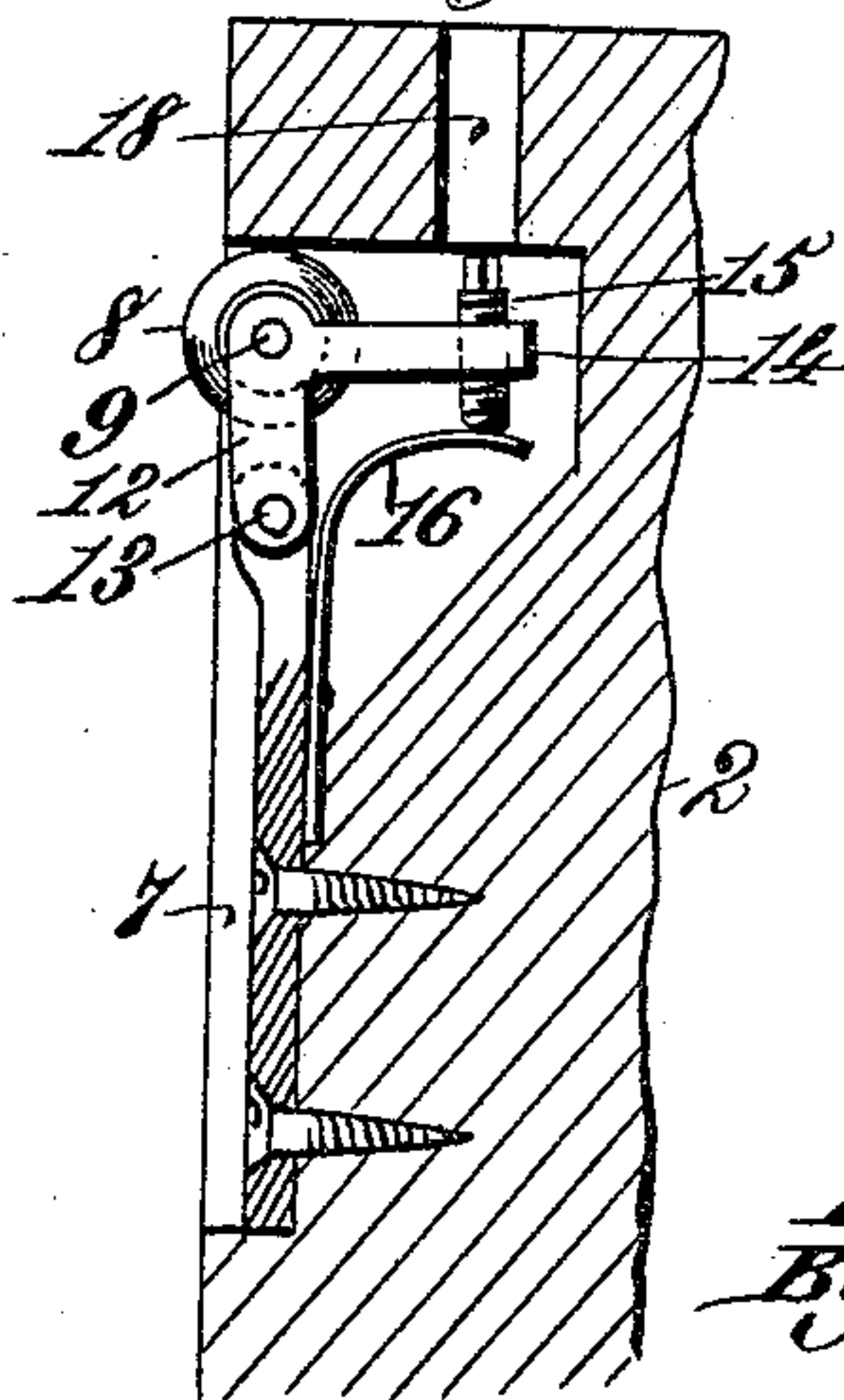


*Fig. 3.*

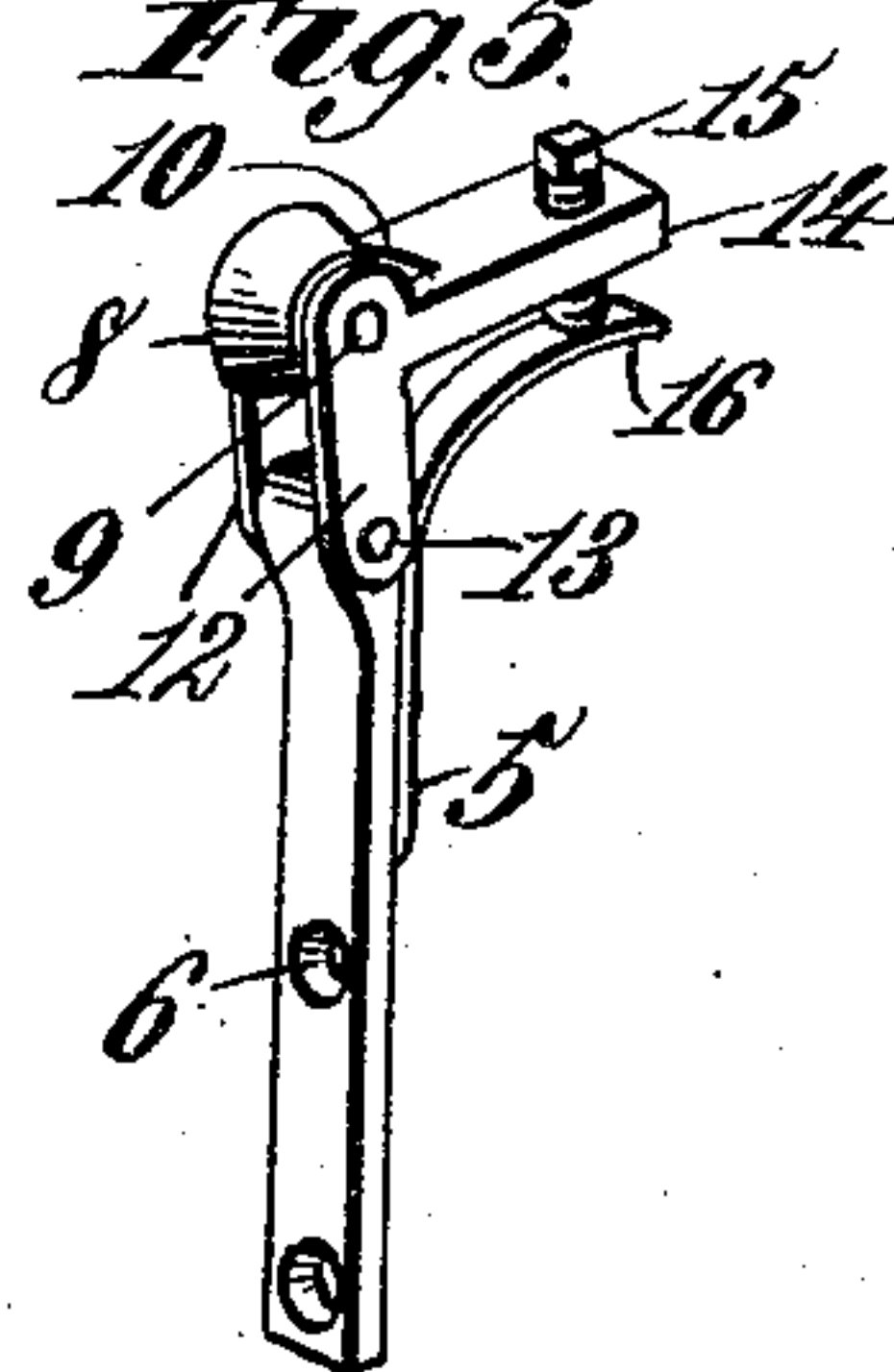


Witnesses.  
*Chas. E. Smith.*  
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*Fig. 4.*



*Fig. 5.*



Inventor.  
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# UNITED STATES PATENT OFFICE.

PHILIP S. RIDDELLE, OF WOODSTOCK, VIRGINIA.

## SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 501,809, dated July 18, 1893.

Application filed February 24, 1893. Serial No. 463,597. (No model.)

*To all whom it may concern:*

Be it known that I, PHILIP S. RIDDELLE, a citizen of the United States, residing at Woodstock, in the county of Shenandoah and State of Virginia, have invented new and useful Improvements in Anti-Rattling Attachments for Window-Sashes, of which the following is a specification.

This invention has for its object to provide a novel, simple, efficient and economical anti-friction roller attachment for the window sashes of buildings and cars or other vehicles, whereby the sash will be constantly wedged or forced outwardly, or against the bead of the window frame to secure a tight joint therewith, and prevent rattling.

The invention also has for its object to provide novel means, whereby the pressure of a spring-pressed anti-friction roller can be varied without materially interfering with the yielding of the roller in raising or lowering the sash.

The invention consists in the combination with a spring yielding support, of a bevel-faced or conoidal anti-friction roller mounted on the support and adapted to travel on a guide rail, to wedge or force the sash laterally against the bead of the window frame.

The invention also consists in the combination with a pivoted support, of an anti-friction roller carried by the support, a spring for exerting pressure on the support, and an adjustable connection between the support and the spring for varying the tension of the spring without preventing the yielding of the roller support.

The invention also consists in certain features of construction and combination or arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1, is an elevation of a window sash provided with my invention, portions of a window frame being also illustrated. Fig. 2, is a plan view of the sash, showing portions of the window frame in section. Fig. 3, is a detail sectional view taken on the line 3—3, Fig. 1. Fig. 4, is a detail sectional view taken on the line 4—4 Fig. 3, and Fig. 5, is a detail perspective view of the anti-rattling attachment.

In order to enable those skilled in the art

to make and use my invention, I will now describe the same in detail, referring to the drawings wherein the numeral 1 indicates a window frame, and 2 a window sash, which parts may be of any construction suitable for the conditions required. The side rails of the window sash are provided at each end with an anti-rattling attachment, which as is illustrated by Fig. 5, comprises a suitable plate 5 provided with screw holes 6, by which to secure it in a recess 7, of a side rail of the sash. The anti-friction roller 8, is bevel-faced or conoidal, and is mounted on a pivot 9, arranged at the angle of a bell-crank lever 10, one member of which lever is bifurcated to form arms 12 which embrace the upper end of the plate 5 and are pivoted thereto by a pivot pin 13. The other member 14, of the bell-crank lever is provided with a screw socket to receive a set-screw 15, having an angular head to which a suitable key may be applied for turning the screw in the socket. The lower end of the screw bears against the curved free extremity of a leaf or flat spring 16, rigidly secured at its opposite extremity to the plate 5, in such manner that the tension of the spring is exerted on the set screw and constantly tends to force the anti-friction roller 8 against the guide rails 17, applied to the window frame, as clearly represented in Figs. 1 and 2.

The bell-crank lever 10 constitutes a pivot support for the roller 8 and by swinging this support in the proper direction, the roller is caused to bear with more or less pressure against the guide rail 17. It is desirable to vary the pressure of the roller without materially interfering with its yielding in raising or lowering the sash, and this is accomplished by the set screw 15, the adjustment of which in the proper direction, increases or diminishes the tension of the spring 16, but at the same time the roller support is free to yield. As here shown, the angular head of the set-screw is arranged in coincidence with an orifice 18, formed in the top rail of the window sash, Fig. 4, so that a key can be inserted through the orifice and engaged with the angular head of the set-screw for adjusting the same to vary the tension of the spring. I do not, however, wish to be understood as confining myself to the particular arrangement



of the orifice 18, illustrated in the drawings, nor to the employment of a set-screw as the adjustable connection between the bell-crank lever or roller support and the spring.

5 The plate 5 is arranged in the recess 7 of the sash rail, in such manner that the roller 8 projects more or less from the edge of the sash, and by tightening the set-screw the roller is caused to move outward, or exert  
10 more pressure against the guide rail 17, and conversely if the set screw be loosened the pressure of the roller on the guide rail is diminished.

The bevel-faced or conoidal construction of  
15 the anti-friction roller is important in that it co-operates with the guide-rail 17 to wedge or force the sash outwardly, or against the bead 19 of the window frame, Fig. 3, thereby securing a tight joint between the sash and the  
20 outermost bead, whereby rattling is prevented by the sash vibrating between the beads of the window frame. The pressure of the anti-friction rollers against the opposite guide rails 17 suspends the sash in such manner  
25 that rattling is prevented by vibrations of the sash between said guide rails. By this means the sash is rendered susceptible of convenient and quick movement for raising and lowering the same and all objectionable  
30 noise incident to rattling of the sash is entirely avoided.

The invention provides a very desirable anti-rattling attachment for the sashes of dwellings and other buildings, and cars or  
35 other vehicles, and is especially useful in traveling vehicles, in that ordinary warping of the window frame, or sash frame, will not materially interfere with the convenient raising and lowering of the sash.

40 In windows having no special contrivances to facilitate raising and lowering the sashes, the swelling of the sash-frame frequently prevents it from being raised or lowered, and shrinking of the same results in rattling and  
45 disagreeable noise. The improved attachment described and shown, renders it possible to quickly and easily raise or lower the sash even if it swells, while shrinking of the sash-frame does not result in rattling since  
50 the adjustable roller bearings compensate for shrinking and keep the sash steady in the window frame.

Having thus described my invention, what I claim is—

1. In an anti-rattling attachment for a window sash, the combination with a spring yielding support, a projecting guide-rail, of a bevel-faced or conoidal anti-friction roller mounted on said support and adapted to travel against the projecting guide rail to wedge or force the  
60 sash laterally against the bead of the window frame, substantially as described.

2. In an anti-rattling attachment for a window sash, the combination with a spring yielding support, a spring for acting upon said support, and a projecting guide-rail, of a bevel-faced or conoidal anti-friction roller mounted on the support and adapted to travel against the projecting guide rail to wedge or force the  
70 sash laterally against the bead of the window frame, and an adjustable connection between the support and the spring for varying the tension of the latter without preventing yielding movements of the support, substantially as described.

3. In an anti-rattling attachment for a window sash, the combination of a supporting plate 5, a roller support composed of a bell-crank lever having one member pivoted to the supporting plate, a spring for exerting pressure on the roller support, and an adjustable connection between the spring and the other member of the bell-crank lever, for rocking the said lever on the supporting plates and  
80 varying the tension of the spring without preventing yielding movements of the lever, substantially as described.

4. In an anti-rattling attachment for a window sash, the combination of a supporting plate, a bell crank lever having one member  
90 pivoted to the supporting plate and the other member provided with a screw socket, an anti-friction roller at the angle of the lever, a spring secured to the supporting plate, and a set-screw engaging the screw socket in the  
95 lever and acting against the free extremity of the spring, substantially as described.

In testimony whereof I have hereunto set my hand and affixed my seal in presence of two subscribing witnesses.

P. S. RIDDELLE. [L. S.]

Witnesses:

WM. S. KLINE,  
ALBERT H. NORRIS.