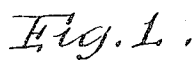


1,352,875.

2 SHEETS—SHEET 1.



INVENTOR
Edward F. Chaffee
BY
Parsons & Rodell.
ATTORNEYS

E. F. CHAFFEE.
 BRAKE FOR WINDOW SASHES.
 APPLICATION FILED APR. 15, 1918.

1,352,875.

Patented Sept. 14, 1920.
 2 SHEETS—SHEET 2.

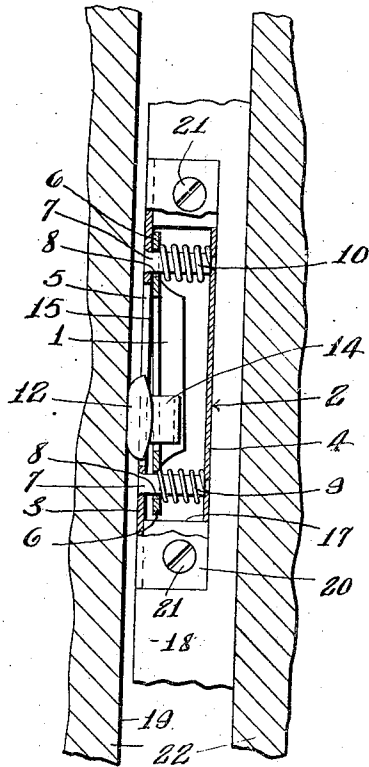


Fig. 2.

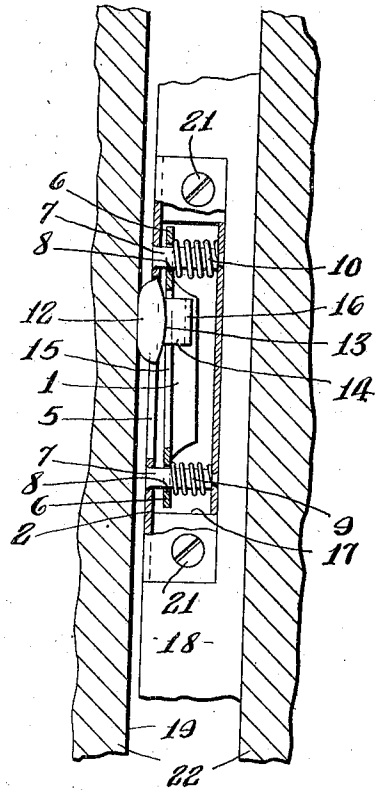


Fig. 3.

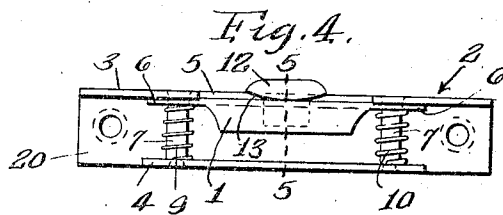
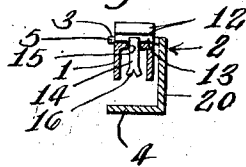


Fig. 5.



INVENTOR
Edward F. Chaffee
 BY
Baron & Bodell
 ATTORNEYS

UNITED STATES PATENT OFFICE.

EDWARD F. CHAFFEE, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE O. M. EDWARDS COMPANY, INC., OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

BRAKE FOR WINDOW-SASHES.

1,352,875.

Specification of Letters Patent. Patented Sept. 14, 1920.

Application filed April 15, 1918. Serial No. 228,577.

To all whom it may concern:

Be it known that I, EDWARD F. CHAFFEE, a citizen of the United States, and a resident of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Brake for Window-Sashes, of which the following is a specification.

This invention relates to brakes for window sashes particularly applicable to check the movement of the sashes of railway car windows or to increase the braking action as the movement of the sash increases, and has for its object a brake for sashes which is particularly simple in construction and highly efficient and durable in use, and also which is readily attachable to the sashes. The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a front elevation of a sash embodying my invention, the contiguous portion of the window frame being also shown, one of the stops being removed, and the other stop being broken away.

Figs. 2 and 3 are enlarged sectional views taken on the plane of line 2—3, Fig. 1, illustrating the operation of the brake, the brake shoe being shown as in its starting position in Fig. 2, and at the limit of its braking movement in Fig. 3.

Fig. 4 is a side elevation of the detached brake.

Fig. 5 is a sectional view on line 5—5, Fig. 4.

This brake for window sashes comprises a compression member, springs of different strength or weight acting on said member at points spaced apart and a brake element movable along the compression member. The brake element is arranged to be actuated by more or less sudden movement of the sash to shift the brake element along the compression member away from the influence of the weaker spring into a position where it is acted on to a greater extent by the stronger spring.

1 designates the compression member which is here shown as located in a body or box 2 having opposing sides or plates 3, 4,

the side 3 being formed with a lengthwise slot 5 therethrough, through which the compression member 1 is exposed, the compression member 1 having portions as ears 6 extending under the side or plate 3 at the ends of the slot 5 and movable or slidable along posts 7 extending between the sides 3, 4, the ears having openings 8 through which the posts extend.

9 and 10 are compression springs encircling the posts 7 respectively, and interposed between said ears 6 and the side 4 of the box, the spring 10 being stronger or heavier than the spring 9 so that one end of the compression member yields more readily than the other end and the braking force increases as the brake element moves along the compression member toward the end thereof acted upon by the stronger spring 10.

12 is the brake element which is here shown as in the form of a shoe slidable along the upper face of the compression member 1, and also having a slight rocking movement relatively thereto, it being here shown as having arc-shaped bearing faces 13 engaging the compression member. Said brake element or shoe is here illustrated as secured to the compression member by a wide shank 14 extending through a lengthwise guide slot 15 formed in the compression member, the shank having its inner end spread at 16 to prevent detachment thereof from the compression member.

The body or box 2 is usually bent from sheet metal in the form of a channel, and in use the body is fitted in the recess 17 in the margin of the sash 18, the recess opening through one face of the sash, as the front face, opposed to the front wall or stop 19 and also through the edge face of the sash. The body or box is arranged with the bottom wall 20 of the channel that is, the wall between the sides 3, 4, closing the side of the recess opening through the edge face of the sash, and with the side walls 3 closing the side of the recess opening through the front face of the sash. The box is held in position by means of screws 21 passing through the wall 20 near the end thereof and into the edge of the sash. There is preferably, a brake at each side of the sash located so that the brake shoes coact with one of the walls of the contiguous guide 22 of

the window frame as the inner faces of the front window stops 19. The sash is provided with the usual sash holders 24 near the lower corners thereof. The brake device is arranged with the weaker spring 9 toward the lower end of the sash.

In operation, when the sash is raised it is held elevated by the holder 24 and when it is to be lowered or dropped, the operator releases the sash holders 24 by operating the handle thereof in the usual manner, and usually immediately lets go of the holders instead of partly supporting the sash during its downward movement so that the sash starts to drop, and if a braking force were not applied would drop suddenly with the liability of injuring passengers and of breaking the sash holders when the holders strike the shoulder with which they interlock when the sash is down. As the sash drops, the shoes 12 slide along the compression members 1 from the lower end toward the upper or from the point the lower weak spring 9 acts on the compression member toward the point the stronger spring 10 acts on said member; or rather the shoe does not travel downwardly with the sash as fast as the sash so that the compression member moves downwardly relatively to the shoe 12. Thus, the friction of the shoes 12 on the window stops is increased and some force must be applied to close the window sash, or the sash again partly lifted by the operator to displace the shoes 12 toward the weaker spring and then partly supported by the operator during its closing movement.

This brake is particularly advantageous in that it is readily substituted for sash holding devices now used on the window sashes of railway cars and further in that owing to the use of springs of different strength the braking action of the shoes is increased as the speed of the sash increases.

What I claim is:

1. A brake for window sashes comprising a compression member, springs acting on said member at points spaced apart, and a braking element movable rectilinearly along said compression member between the points where the forces of the springs are applied to said member and arranged to be actuated by a sudden movement of the sash to carry the said member from the influence of one spring to that of another, substantially as and for the purpose described.

2. A brake for window sashes comprising a compression member, springs of different strength acting on opposite ends of said member, and a braking element slidable along said member and arranged to be actuated by a sudden movement of the sash to carry the said member from the influence of the weaker spring to that of the stronger.

substantially as and for the purpose specified.

3. A brake for window sashes comprising a compression member, springs of different strength acting on opposite ends of said member, and a brake shoe slidable along said member and arranged to be actuated by a sudden movement of the sash to carry the said member from the influence of the weaker spring to that of the stronger, substantially as and for the purpose set forth.

4. A sash holder comprising a compression member formed with a lengthwise guide, springs of different strength acting on said member near opposite ends of the guide and arranged to be actuated by a sudden movement of the sash to carry the said member from the influence of the weaker spring to that of the stronger, and a brake element slidable rectilinearly along the guide, substantially as and for the purpose described.

5. A brake for window sashes comprising a body having opposing sides spaced apart, posts interposed between said sides, one of said sides being formed with a lengthwise slot between the posts, a compression member exposed through the slot and having portions extending under the side formed with the slot, said portions being slidable on the posts, springs encircling the post and acting on said member, and a brake element extending through the slot and movable along the compression element, substantially as and for the purpose specified.

6. A sash holder comprising a body including a plate formed with a slot therein, a compression member located beneath the plate and exposed through the slot and having ears extending under the plate at the ends of the slot, compression springs of different strength acting on said ears, and a brake shoe projecting through the slot and slidable along said member, substantially as and for the purpose set forth.

7. The combination of a window frame formed with guideways, a sash movable in the guideways and a friction brake for the sash comprising a body set into the margin of the sash, a compression member carried by the body and opposed to a wall of one of the guides, springs of different strength acting on said member at points spaced apart, and a brake element movable along said member between the points at which the forces of the springs are applied to said member, the brake element engaging one of the walls of the guide, substantially as and for the purpose described.

In testimony whereof, I have hereunto signed my name, at Syracuse, in the county of Onondaga, and State of New York, this 14 day of March, 1918.

EDWARD F. CHAFFEE.