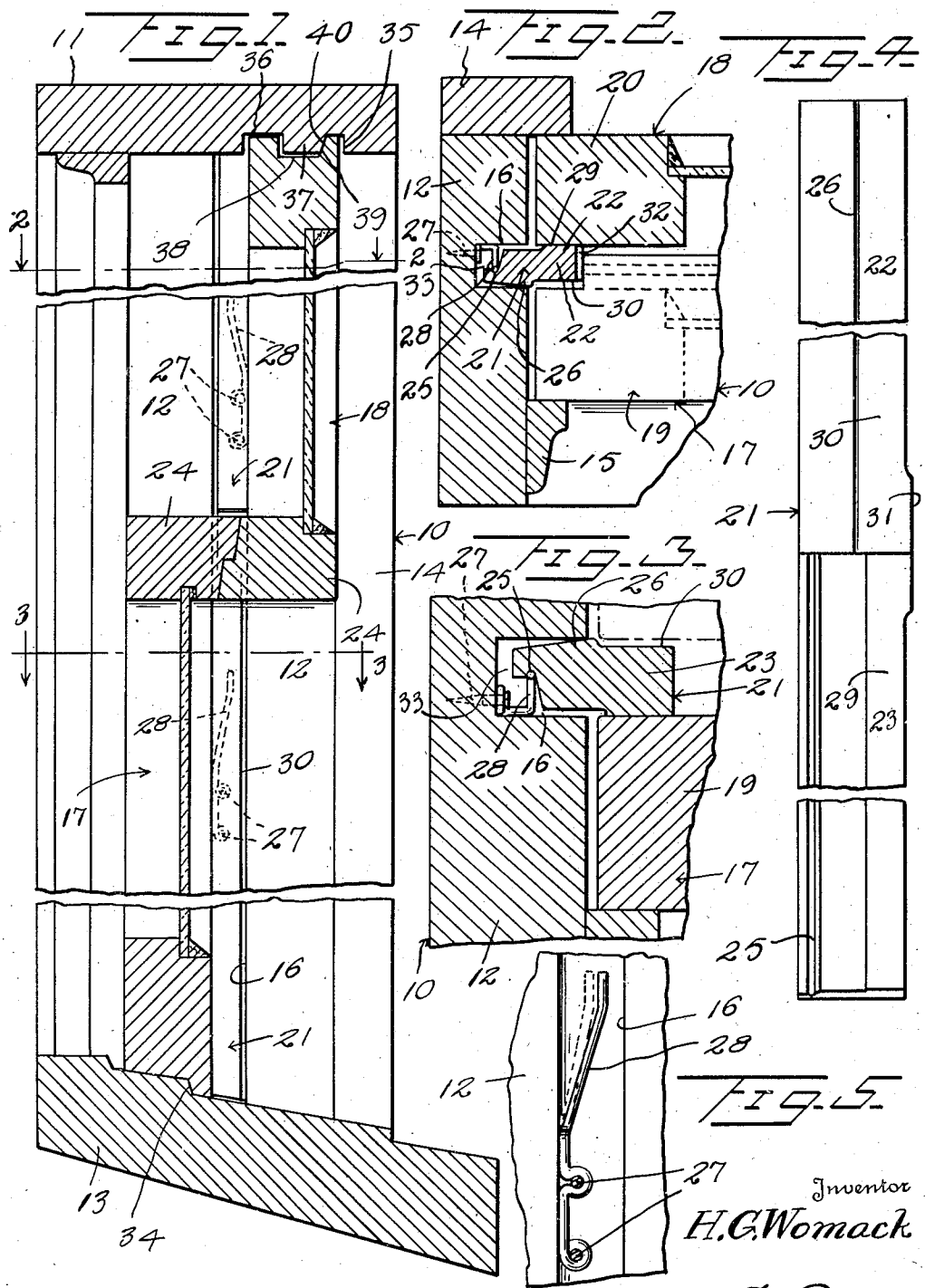
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WINDOW FRAME PARTING STOP

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WINDOW FRAME PARTING STOP

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This invention relates generally to improvements in building construction and pertains particularly to improvements in parting stops for window frames.

A principal object of the present invention is to provide an improved parting stop construction for window frames, wherein the parting stop is supported in such a manner within the jamb as to have slight oscillatory movement with respect to the face of an adjacent stile of a sash, whereby a tight contact is maintained at all times between the parting stop and the sash stile, the oscillatory movement of the parting stop being effected by a resilient element supported in the stop groove and having engagement with the stop.

Another object of the invention is to provide, in a window sash, an improved parting stop construction in which each parting stop is formed in two sections disposed in end engagement, one above the other, each of the stop sections being so designed that as a sash is shifted from closed to opened position it will have continually decreasing contact with the stop sections adjacent thereto and will run free of connection with the stop section of the adjacent sash, thereby facilitating the free movement of the sash.

A still further object of the invention is to provide, in a window frame construction, improved pressure parting stops which are designed to be installed in a window frame without having to make any change or alteration in the construction of the frame or sashes other than to increase slightly the depth of the parting stop grooves in the jambs, in which the improved parting stops are positioned and in which they function in cooperation with the adjacent sashes for the attainment of the desired results.

The invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawing forming a part of this specification, with the understanding, however, that the invention is not confined to a strict conformity with the showing of the drawing but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention as expressed in the appended claims.

In the drawing:

Figure 1 is a vertical sectional view through a window frame showing the present invention applied thereto.

Figure 2 is a horizontal section taken substantially on the line 2—2 of Figure 1.

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Figure 3 is a partial section on an enlarged scale taken on the line 3—3 of Figure 1.

Figure 4 is a view of the two sections of a parting stop, in side elevation and in operative relation.

Figure 5 is a detail view looking into a portion of a parting stop channel and showing a parting stop spring mounted therein.

Referring now more particularly to the drawing, the numeral 10 generally designates a window frame of the usual construction or design in that it comprises the top or head jamb 11, the jambs or side jambs 12 and the sill 13. The numerals 14 and 15 designate respectively the blind stop which is at the outer side of the frame, and the inside stop and centrally between these stops the jambs 12 are provided with the usual centrally located longitudinally extending channels 16 in which are located the hereinafter described parting stops which separate the inner and outer or lower and upper, sash 17 and 18 respectively. The side stiles of the lower and upper sash are, respectively, designated 19 and 20.

The parting stop located in each channel 16 and constructed in accordance with the present invention is generally designated 21. Each parting stop is formed in two sections designated 22 and 23, for the upper and lower sections respectively. These sections are disposed one above the other and in end abutting relation in the plane of the sash check rails 24.

The parting stop sections are of materially greater width than thickness as is clearly shown in the horizontal sectional views.

Each parting stop section has a groove 25 formed longitudinally in one side face at the edge of the section lying within the channel 16 and the opposite face has that portion lying opposite from the groove 25 bevelled slightly to form the substantially centrally located longitudinally extending fulcrum rib 26 which bears against the adjacent side of the channel adjacent the outer side or longitudinal corner thereof.

Secured to the inner or bottom wall of the channel adjacent to each parting stop section, by the screws 27 or other suitable means, are the spring fingers 28 each of which rests in a groove 25 and exerts pressure transversely of the parting stop section which it engages, tending to cause the section to rock on the fulcrum 26.

The outer half of each parting stop section upon the side face opposite from the fulcrum rib 26 has the outset or outwardly projecting relatively wide bearing flange 29 which presses

against the adjacent face of the adjacent sash stile. In the upper section of the parting stop this outset bearing flange is directed toward the outside of the window and engages the inner side of the stile of the top sash while in the lower section of the parting stop, designated **23**, this bearing flange faces inwardly and engages the outer face of the side stile of the lower or bottom sash.

The portion of the side face of each parting stop section directly opposite from the bearing flange, is inset or recessed as indicated at **30**. Since the parting stop sections are urged to oscillate in opposite directions by their respective springs **28** and the space between the check rails of the upper and lower sash is slightly greater than the over-all width of each parting stop section in the portion between the face of the bearing flange and the surface of the recess **30**, it will be seen that a clearance is provided between the side of each parting stop section opposite the bearing flange and the sash stile opposite from that against which the bearing flange engages, so that when either sash is shifted to open position it will be free of frictional contact with the parting stop section of the other sash.

The inner edge surfaces of the parting stop sections are likewise provided through the parts thereof which position in the rabbets at the ends of the check rail when the sashes are in closed position, with outset portions as indicated at **31** and such outset portion of each parting stop section engages the adjacent end of the check rail when the sashes are closed. However, when either sash is opened a clearance is provided between the end of the check rail and the edge of the adjacent parting stop section as indicated at **32**, thereby providing for the free movement of the sashes with respect to the parting stop.

These wide or outset portions **31** form a tight seal at the check rails.

The parting stops are of a width which allows for a clearance **33** between the inner edges of the strip sections and the bottoms of the channels in which they are positioned. The springs are sufficiently flexible so that any expansion in the width of the sash is taken care of by this clearance between the back edge of the parting stop sections and the bottom of the channel in the jamb in which the parting stop is set.

The action of the springs is to force the parting stops or the fulcrum ribs thereof tightly against the sides of the channel **16** and the slight rocking movement which would be imparted to the parting stop sections from this action of the spring, forces the bearing flange of each section slightly against the adjacent sash stile.

The top parting stops contact the bottom sash only at the check rail, and the bottom stops contact the top sash only at the check rail. It will thus be seen upon reference to the drawing that the bottom and top stops or parting stop sections are completely independent of each other. When the bottom sash is raised, there is a space or clearance at **30** between the bottom sash and the top sections of the parting stops. This clearance progressively lessens the pressure of the bottom parting stop sections on the sash as it is raised making for easier opening of the same. When the bottom sash is completely raised, or the upper sash is completely lowered, only a small portion of one of the parting stop sections is in contact with the sash.

The sill **13** has a bevelled rabbet **34** and the bottom rail of the bottom sash is rabbeted to conform to the shape of the sill, forming a tight seal without interfering with drainage of the sill.

The head jamb is provided with two parallel grooves **35** and **36** and an intervening tongue **37**. The top rail of the top sash is longitudinally grooved as indicated at **38**. The outer side of this groove is bevelled as indicated at **39** to allow for any variation between the head jamb and the top rail of the sash. As will be readily apparent the bevelled side of the groove **38** bears against a correspondingly bevelled inner side **40** of the groove **35** thereby establishing a tight joint.

From the foregoing, it will be readily apparent that a window constructed with parting stops of the design herein disclosed and with the joints between the top rail of the top sash and the head jamb and between the bottom rail of the bottom sash and the sill, constructed as illustrated and described, will be air and water tight. At the same time, by reason of the novel formation of the parting stop sections, the upper and lower sash may be easily shifted with a minimum of friction.

It is also to be understood that the stops herein described may be used horizontally on or in connection with horizontal sliding windows to prevent rattle and infiltration of air.

I claim:

1. A window frame and sash construction, a frame having side jambs each having a parting stop channel formed longitudinally therein and sash in the frame between the jambs; a parting stop in each channel formed of two independent sections disposed in end abutting relation, each section having a portion extending outwardly from the channel to position between adjacent sash, each section having a longitudinal rib on one side face engaging and rocking upon the adjacent side of the channel, spring means housed entirely within the channel adjacent to the side faces of the sections opposite from the rib and engaging the section to rock the same on the ribs, the portion of each parting stop section lying outside the channel and along the side face thereof opposite from the rib being formed to provide an outstanding bearing flange having contact with the adjacent sash.

2. A window frame and sash construction as set forth in claim 1, in which the side face of each parting stop section opposite from the bearing flange, is recessed to form a clearance space between the section and the other sash.

3. In a window frame and sash construction, a frame having side jambs each having a parting stop channel formed longitudinally therein and sash in the frame between the jambs; a parting stop strip in each channel and divided into two sections having end abutting relation, each section being disposed adjacent to a vertical stile of one sash, means forming a fulcrum upon one side face of each parting stop section and bearing against the adjacent side of the channel, a bearing flange formed along the side face of each section opposite from the fulcrum forming means and disposed outside the channel for bearing contact with the adjacent sash stile, each parting stop section having a groove formed in the side face opposite from the fulcrum forming means and disposed in the channel, and a spring member secured in the channel and engaged in the adjacent groove and constantly urging oscillation of the section upon the fulcrum means to maintain tight contact between the flange and the sash stile engaged thereby.

4. In a window frame and sash construction, a

frame having side jambs each having a parting stop channel formed longitudinally therein, and sash in the frame between the jambs; a parting stop in each channel formed in two sections having end abutting relation, each parting stop section being constructed for oscillation on a center extending lengthwise thereof to effect engagement between one side face of the section and an adjacent sash stile, means within the channel and engaging each section for effecting the oscillation thereof, and each parting stop section being shaped to provide an outset portion adjacent to the abutting ends of the sections, upon the outer edge face thereof and extending in a lengthwise direction, for engagement with an adjacent portion of the check rail of a sash when the sashes are in closed position.

5. A window frame and sash construction as set forth in claim 4, wherein the said means for effecting oscillation of each parting stop section is positioned upon the bottom of the channel and maintains the section in a position in the channel in which the inner edge face of the section is in spaced relation with the bottom of the channel.

6. In a window frame and sash construction including a frame having side jambs each having a parting stop channel formed longitudinally therein and sash in the frame between the jambs; a parting stop strip in each channel and divided into two sections having end abutting relation, each section being disposed adjacent to a vertical stile of one sash, one side face of each parting

stop section being formed to provide a longitudinally extending fulcrum rib disposed substantially midway between the inner and outer edge faces and having rocking bearing against the adjacent side of the channel, a bearing flange formed along the side face of each section opposite from the fulcrum forming rib and disposed outside the channel for bearing contact with the adjacent sash stile, each parting stop section having a groove formed in the side face opposite from the fulcrum forming rib and disposed within the channel inwardly from the rib, said groove further opening at one side toward the bottom of the channel, and a spring member secured within the channel and engaged in the adjacent groove and constantly imposing a thrust against the engaged section tending to rock the section upon the fulcrum rib to maintain a tight contact between the flange and the sash stile engaged thereby.

7. A structure as set forth in claim 6, wherein said spring member comprises a portion disposed against and secured to the bottom surface of the channel and a free portion having a part directed outwardly from the bottom of the channel and having a second terminal part directed across the channel for engagement in the adjacent groove, whereby the engaged portion is yieldingly held against movement into and toward the bottom of the channel.

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