C. FISCHER.

DRAFT DEFLECTOR.

APPLICATION FILED APR. 12, 1913.

1,088,139.

Patented Feb. 24, 1914.

2 SHEETS—SHEET 1.

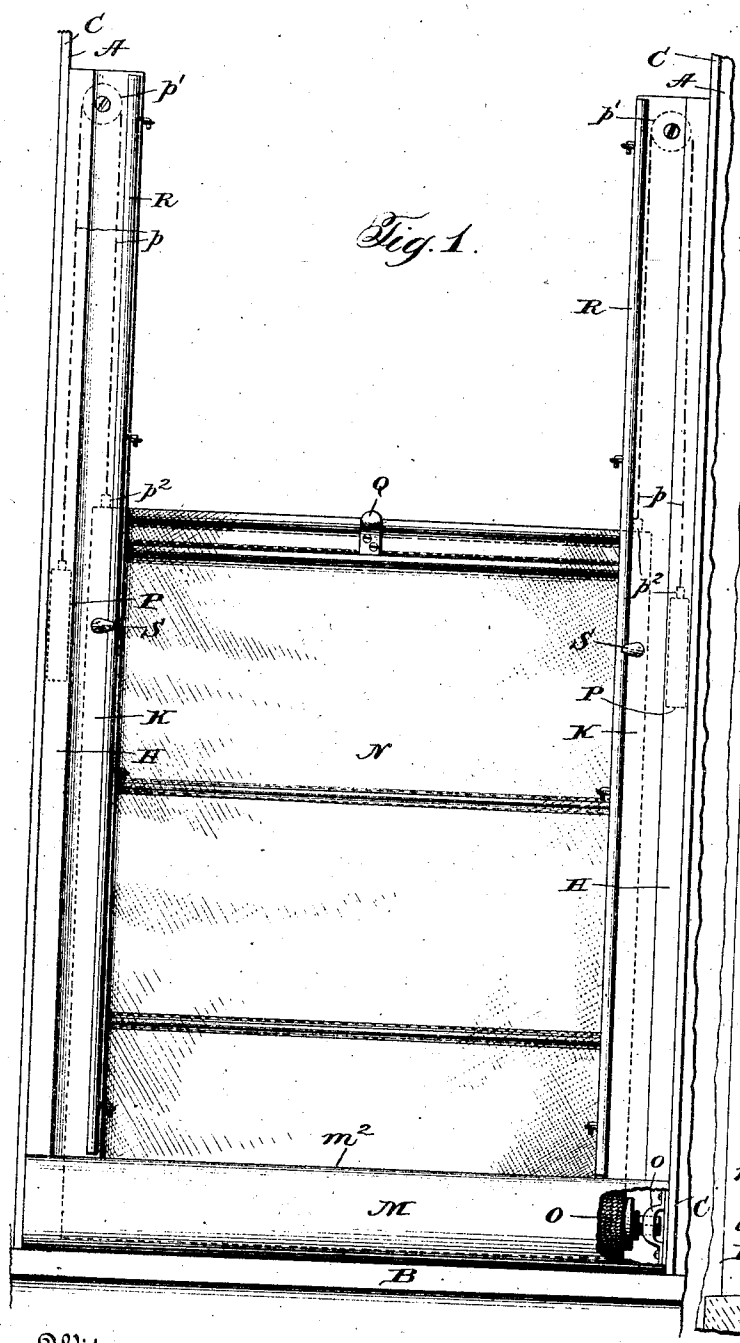

Fig. 1.

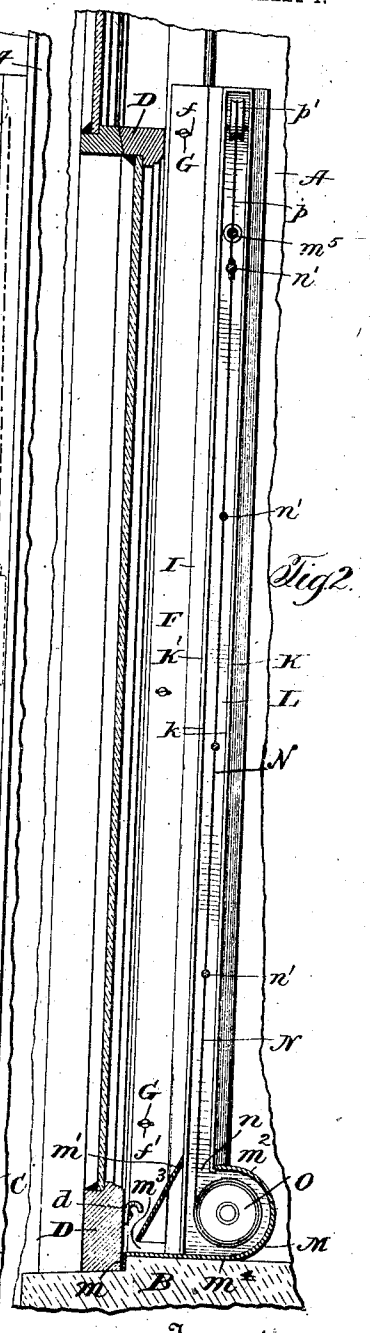

Fig. 2.

Witnesses.

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2 SHEETS—SHEET 2.

Fig. 3.

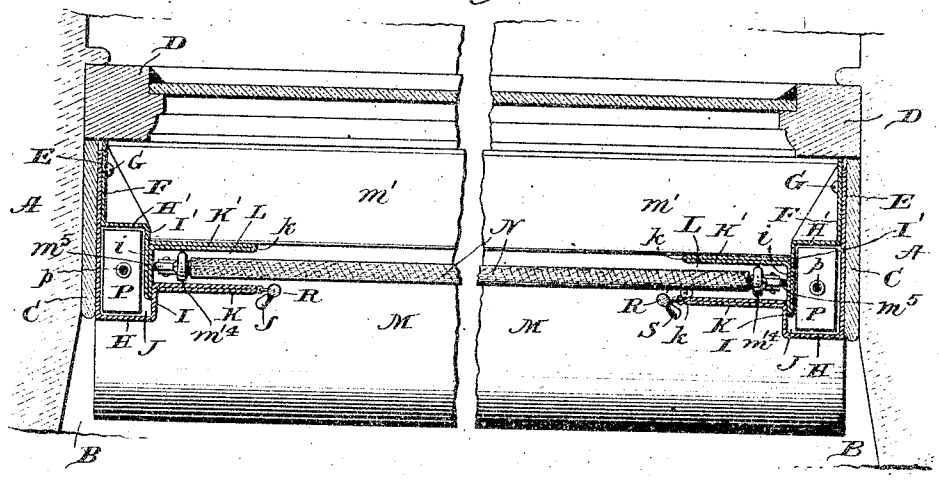


Fig. 4.

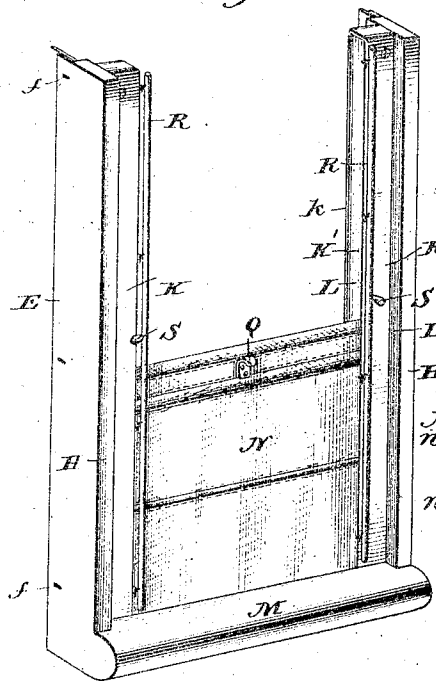


Fig. 6.

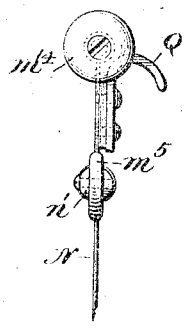
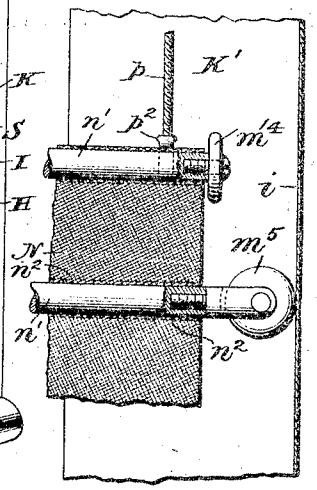


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

CARL FISCHER, OF WASHINGTON, DISTRICT OF COLUMBIA.

DRAFT-DEFLECTOR.

1,088,139. Specification of Letters Patent. Patented Feb. 24, 1914.

Application filed April 12, 1913. Serial No. 760,786.

To all whom it may concern:

Be it known that I, CARL FISCHER, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Draft-Deflectors, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in draft deflecting attachments for windows, and has for its object the provision of a simple, inexpensive device, capable of ready attachment to an ordinary window and having provision for adjustability, in keeping with the opening of a window sash, the attachment being primarily designed for use at the bottom of the window frame in conjunction with the lower sliding sash; although, as will be apparent to persons skilled in the art, the device is capable of use in other locations and for other similar purposes, as for example, a shade.

The invention comprises a housing associated with suitable side guides adapted to be attached to the window frame, to inclose and guide a flexible deflector associated with counterbalancing means for maintaining the shade in different positions of adjustment.

The invention further comprises a special formation of combined guide (for deflector) and way (for counterbalancing means), and preferably adjusting means for regulating the width of the guideway.

The invention further comprises a special formation of the guides enabling the utilization of anti-friction devices projecting beyond the edges and surfaces of the deflector to facilitate the movement thereof; and means for locking the deflector against face-wise play to prevent rattling under the influence of winds, etc.

The foregoing, as well as other characteristics of improved details in the construction and arrangement of the several parts of the preferred embodiment of the invention will be apparent from the detailed description hereinafter contained when read in connection with the accompanying drawings forming part hereof and wherein said embodiment is disclosed.

In the drawings: Figure 1 is a front view of a portion of an ordinary window showing my attachment applied thereto; Fig. 2 is a vertical sectional view; Fig. 3 is a horizontal sectional view; Fig. 4 is a perspective view of the attachment separated from the window frame; Fig. 5 is a detail sectional view illustrating the anti-friction devices carried by the deflector, and Fig. 6 is a partial edge view of the deflector as shown in Fig. 5.

Referring more specifically to the drawings wherein like reference characters designate corresponding parts in the several views, A represents the side members of a window frame, B the usual sill and C the inwardly projecting molding immediately adjoining the lower sliding sash. Removably attached to the molding C at the opposite sides of the window frame and at the bottom of the latter are a pair of combined guides and ways, each composed of two sheet metal members having flat base portions E and F, respectively, superimposed at their inner edges and adjustably connected together and to the adjacent molding C through the medium of screws G passing through horizontal slots *f* in the base F and then through the member E and embedded in the molding C. The base E is of considerably greater width than the base F,—approximately the width of the molding C or less than the width of said molding, so as not to project forwardly thereover. The bases E and F are bent outwardly at right angles as at H, H′, thence inwardly, parallel to the base, as at I, I′, to constitute an open or box-like structure forming a way J therewithin, said portions I, I′ extending in opposite directions toward each other and terminating in flanges K, K′, offset at right angles to the portions I, I′ and also at right angles relative to the bases E and F. The flanges K, K′ are separated to constitute a guideway L, the width of this guideway being regulated by the relative adjustment of the bases through the medium of the screw-and-slot fastening means G—*f*.

The base of the guideway L is closed by carrying inwardly the portion I′ so as to underlie the portion I, then folding the metal upon itself across said base portion of the guideway L to constitute a vertical wall *i* terminating in the flange K′. The flanges K, K′ are formed with the metal folded upon itself to constitute rounded edges *k*.

The guide members, above defined, termi-

nate at their lower ends and are secured to the opposite ends of a casing M, the same also being formed of sheet metal arranged in a horizontal position and having a flat bottom to rest upon the sill B, with a depending flange m fitting behind the sill B between the same and the lower sash D. The back wall m' of the housing M is inclined forwardly to accommodate the lift d of the bottom rail of the sash D, as is obvious. The inclined back wall m' of the housing and the guide members F are connected together so as to be removable from the guide members E, to the lower ends of which latter, the forward rounded portion m^2 of the housing or casing M is connected. The upper portion of the casing is open to provide a longitudinal slot n through which a flexible deflector N may pass into the casing and around a constantly-acting spring roller O mounted at its ends on the end walls of the casing, the usual bearings o, detachably holding the roller in place. The opposite edges of the flexible deflector are guided in the vertical movement of the latter by the guideways L, and to overcome the tension of the spring roller O, counterbalancing weights P are provided suspended from cords p in the ways J, the cords passing over sheaves p' mounted at the upper ends of the guideways L between the flanges K, K′, the opposite ends of the cords represented at p^2 being connected to the ends of the upper edge portion of the deflector N.

The deflector N is preferably formed of cloth or other fabric, conveniently weather-proofed, reinforced by transverse rods of metal n' inserted in pockets formed between the layers of fabric by the lines of stitching n^2, and a handle Q is secured centrally of the upper rod to facilitate adjusting the deflector.

From the foregoing description, it will be apparent that when the sash D is raised for ventilating purposes, the deflector N may be correspondingly adjusted and maintained in position through the medium of the weights P to deflect the draft upwardly in a vertical direction rather than permit the same to enter the room directly horizontally through the window opening; also that by reason of the character of the deflector the same will deflect any sudden rain outwardly and downwardly away from the attachment owing to the inclination of the outer wall m' of the casing and the depending flange m thereof, which would cause the water to flow away from the space between the bottom of the casing and the upper surface of the sill B, and any water getting into the casing, that is around the deflector, would pass out through the opening m^3 between the inclined portion m' and the base m^4 of the casing M.

Projecting beyond the faces of the deflector and also beyond the edge thereof, are anti-friction rollers, preferably rubber, represented at m^{14}, m^5, respectively, adapted to facilitate the raising and lowering of the deflector, the rollers m^{14} engaging the flanges K, K′, and the rollers m^5 engaging the base of the guideways L.

The rollers will serve in a large measure to prevent undue vibration or rattling of the deflector under the influence of winds, but it is desirable, in some instances, to provide a brake or lock, and to that end I pivotally mount, at the ends of the flanges K, a pair of vertical rods R, substantially of the same length as said flanges, provided with operating handles S. These rods are adapted to be turned inwardly, as shown in dotted lines, Fig. 3, to occupy a position between the said flanges K and the adjacent surface of the deflector to bind against the latter and prevent vibration of the same. The rods are further useful in overcoming any tendency of the deflector to rewind upon the constantly acting spring roller, when subjected to the action of winds, which might overcome the counterbalancing effect of the weights.

While I have herein disclosed one special embodiment of my invention, it will be apparent to persons skilled in the art that the invention is capable of embodiment in other forms and arrangements as may be in keeping with the hereto appended claims.

Having thus described the invention, what is claimed is:—

1. In a draft deflector for windows, the combination with deflecting means, of a guide therefor comprising oppositely disposed members forming a guideway therebetween having superposed relatively adjustable base portions to determine the width of the guideway, substantially as described.

2. In a draft deflector for windows, the combination with deflecting means, of a guide therefor comprising oppositely disposed members forming a guideway therebetween having superposed relatively adjustable base portions to determine the width of the guideway, and means for securing the guide members in adjusted positions and to a support therefor.

3. The combination with a window sash and the usual sash frame, of adjustable draft deflecting means provided with an independent counterbalance and suitable guides mounted on the sash frame in front of the window sash in which said deflecting means work and permitting adjustment thereof to various positions relative to the window and independently thereof.

4. The combination with a window sash and the usual sash frame, of guides mounted on said frame in front of the window sash, draft deflecting means working in said guides located in front of the window to de-

flect the draft in a direction approximately parallel to the window, and means permitting adjustment of the draft deflecting means to various positions relative to the window and independently thereof.

5. In a draft deflector of the character described, adjustable deflecting means, a counterbalancing weight therefor, a combined guide and way adapted to receive said deflecting means and said weight, the guideway for the deflecting means being contracted relative to the weight way, said combined guide and way being formed of oppositely disposed sheet metal portions of box-like contour forming the weight way therewithin, and offset separated flanges thereon constituting the relatively restricted guideways for the deflecting means.

6. In a draft deflector of the character described, adjustable deflecting means, a counterbalancing weight therefor, a combined guide and way adapted to receive said deflecting means and said weight, the guideway for the deflecting means being contracted relative to the weight way, said combined guide and way being formed of oppositely disposed sheet metal portions of box-like contour forming the weight way therewithin, and offset separated flanges thereon constituting the relatively restricted guideway for the deflecting means, in combination with sheaves mounted between said flanges over which the cord connecting the weight to the deflecting means passes.

7. The combination with a window sash and the usual sash frame of suitable guide ways mounted on the sash frame in front of the window sash, draft deflecting means working in said guide ways, means at the lower end of the deflecting means for winding the same, and counterbalancing means for said deflecting means permitting adjustment of the latter relative to the window frame and independently thereof.

8. The combination with a window sash and the usual sash frame of suitable guide ways mounted on the sash frame in front of the window sash, draft deflecting means working in said guide ways, means at the lower end of the deflecting means for winding the same, and counterbalancing means connected to the upper end of said deflecting means permitting adjustment of the latter relative to the window frame and independently thereof.

9. The combination with a window sash and the usual sash frame, of suitable guide ways, draft deflecting means working in said guide ways, means at the lower end of the deflecting means for winding the same, and counterbalancing means for said deflecting means permitting adjustment of the latter relative to the window frame and independently thereof, the deflecting means being composed of a fabric reinforced by rods secured at separated points thereacross and having the ends thereof projecting into said guide ways.

10. The combination with a window sash having a suitable lift at its lower end, of flexible draft deflecting means, suitable guide ways therefor, a housing at the lower end of said deflecting means opening to said guide ways, a roller mounted in said housing on which the flexible deflecting means may wind, and an inclined deflector for water in rear of said housing also constituting a receding portion to accommodate the sash lift when the window sash is closed while the draft deflecting means is in place, substantially as described.

11. In a draft deflector of the character described, a flexible deflecting means, suitable guideways therefor, a housing carried by said guide ways and opening thereto, a roller mounted in said housing on which the flexible deflecting means may be wound, said housing having an inclined outer wall, and a depending flange adjacent to the lower edge of said inclined wall, substantially as and for the purpose described.

12. In a draft deflector of the character described, a flexible deflecting means, suitable guideways therefor, a housing carried by said guideways and opening thereto, and a roller mounted in said housing on which the flexible deflecting means may be wound, said housing having a depending flange along the outer edge of its bottom, substantially as and for the purpose described.

13. In a draft deflector of the character described, adjustable deflecting means, a counterbalancing weight therefor, a combined guide and way adapted to receive said deflecting means and said weight, the guide way for the deflecting means being contracted relative to the weight way, said combined guide and way being formed with oppositely disposed sheet metal portions of box-like contour forming the weight way therebetween, and offset separated flanges thereon constituting the relatively restricted guide way for the deflecting means, one of the flanges being bent upon itself at right angles to provide a base for the last mentioned guide way, substantially as described.

14. The combination with a window sash, of a draft deflector comprising flexible adjustable deflecting means, suitable guides therefor, a casing opening to said guides located at the bottom of said deflecting means, said casing having a base portion adapted to rest upon a window sill, a roller in the housing on which the flexible deflecting means may wind, and a depending portion on the housing adapted to overlie the outer edge of the sill between the bottom of the sash and the sill, substantially as described.

15. In a draft deflector of the character

described, a flexible weather-proofed deflecting means, suitable guides therefor, a casing carried by said guides and opening thereto having a flat bottom adapted to rest upon a window sill, and a roller in the housing on which the flexible deflecting means is wound, the housing having a portion adapted to extend from the bottom of the housing on the edge of the sill, substantially as and for the purpose described.

16. In a draft deflector of the character described, a flexible weather-proofed deflecting means, suitable guides therefor, a casing carried by said guides and opening thereto having a flat bottom adapted to rest upon a window sill, a roller in the housing on which the flexible deflecting means is wound, the housing having a portion adapted to extend from the bottom of the housing on the edge of the sill, and the outer wall of the housing being of a receding character to accommodate a window lift, substantially as and for the purpose described.

17. In a draft deflector of the character described, a flexible deflector, means for adjusting the same including a counterbalancing weight, means for winding the flexible deflecting means, and means for guiding said means and for housing the counterbalancing weight including oppositely disposed sheet metal members having superposed base flanges adapted to be secured together and to the window, said base flanges terminating in oppositely offset portions to constitute a weight way, and a restricted guideway beyond the weight way for the flexible deflecting means.

18. In a draft deflector of the character described, a flexible deflector, means for adjusting the same including a counterbalancing weight, means for winding the flexible deflecting means, and means for guiding said means and for housing the counterbalancing weight including oppositely disposed sheet metal members having superposed base flanges adapted to be secured together and to the window, said base flanges terminating in oppositely offset portions to constitute a weight way, and a restricted guideway beyond the weight way for the flexible deflecting means, the restricted guideway being constituted by parallel flanges disposed at approximately right angles to the base flanges separated to receive the flexible deflecting means therebetween.

19. In a draft deflector of the character described, adjustable deflecting means, a counterbalancing weight therefor, a combined guide and way adapted to receive said deflecting means and said weight, the guide way for the deflecting means being contracted relatiye to the weight way, said combined guide and way being formed with oppositely disposed sheet metal portions of box-like contour forming the weight way therebetween, and offset separated flanges thereon constituting the relatively restricted guide way for the deflecting means, one of the flanges being bent upon itself at right angles to provide a base for the last mentioned guide way, and means for adjusting the width of the guide and way.

20. The combination with a window sash and the usual sash frame, of adjustable deflecting means, independent counterbalancing means for the latter to permit adjustment thereof independently of the sash, and relative to the sash, separate guide ways for the deflecting means and weight mounted on the sash frame in front of the window sash, and antifriction devices on the deflecting means engaging the wall of said guide ways, substantially as described.

21. The combination with a window sash and its usual sash frame, of supplemental guide ways mounted on the frame in front of the sash, adjustable draft deflecting means working in said supplemental guide ways, a counterbalancing means therefor, the guide ways being formed with independent channels for the counterbalancing means and the deflecting means, and a base portion between said channels, and the deflecting means being provided with antifriction devices engaging said base, substantially as described.

22. In a draft deflector of the character described, adjustable deflecting means, a counterbalancing weight therefor, a device for winding said means when the counterbalancing weight is overcome, guides for the deflecting means, and means carried by and constituting part of the device for preventing vibration of the deflecting means in said guides.

23. In a draft deflector of the character described, adjustable deflecting means, a counterbalancing weight therefor, a device for winding said means when the counterbalancing weight is overcome, guides for the deflecting means, and means for preventing vibration of the deflecting means in said guides, said means comprising rods mounted adjacent to the guides and adapted to be forced between the deflecting means and the adjacent wall of the guides, substantially as described.

24. In a draft deflector of the character described, suitable guides, adjustable deflecting means associated with said guides, and movable means carried by and constituting part of the device adapted to engage the surface of the deflecting means when at rest for preventing vibration thereof relative to the guides.

25. In a draft deflector of the character described, suitable guides, adjustable deflecting means working therein, and means carried by and constituting part of the device engaging the surface of the deflecting

means for preventing vibration thereof in the guides, comprising devices adapted to be interposed between the deflecting means and an adjacent wall of the guides, substantially as described.

26. The combination with a window sash and its usual sash frame, of supplemental guide ways mounted on the frame in front of the sash, adjustable draft deflecting means working in said supplemental guide ways, a counterbalancing means therefor, the guide ways being formed with independent channels for the counterbalancing means and the deflecting means and a base portion between said channels, the deflecting means being provided with antifriction devices engaging said base, and other antifriction devices engaging the side walls adjoining said base, substantially as described.

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

CARL FISCHER.

Witnesses:
H. N. RAMSEY,
Jos. H. MILANS.