

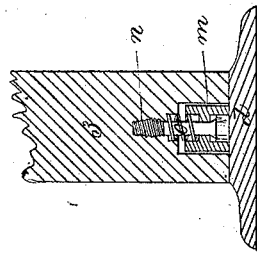
*A. B. Carpenter,*

*Weather Strip,*

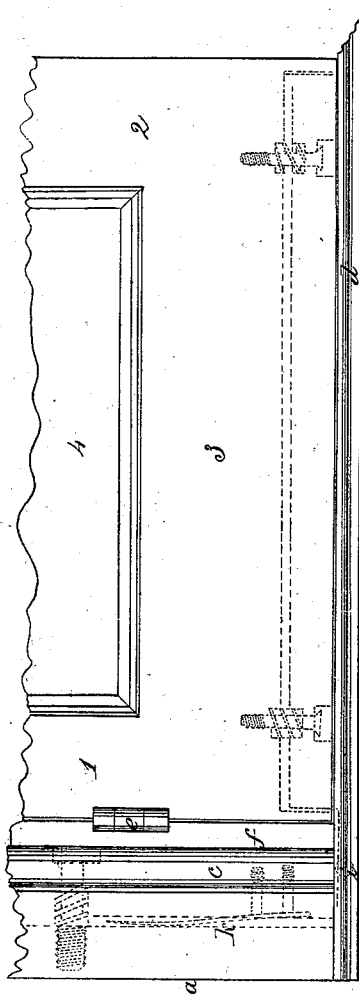
*N<sup>o</sup> 4,200.*

*Patented Sep. 19, 1845*

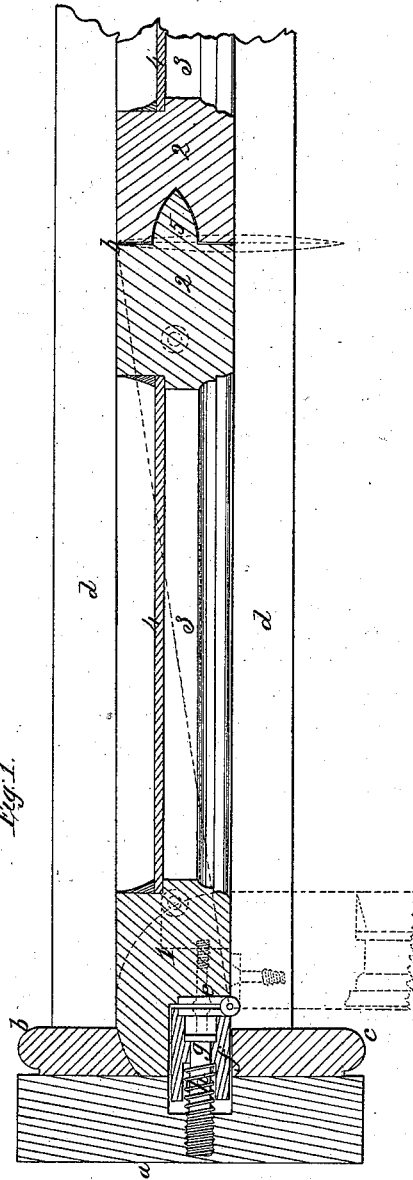
*Fig. 3.*



*Fig. 2.*



*Fig. 1.*



*Witnesses;*

*W. L. F. F. F.*

*Edward W. F. F. F.*

*Inventor;*

*Aaron B. Carpenter*

# UNITED STATES PATENT OFFICE.

AARON B. CARPENTER, OF NEW YORK, N. Y.

## MODE OF HANGING DOORS AND WINDOWS.

Specification of Letters Patent No. 4,200, dated September 19, 1845.

*To all whom it may concern:*

Be it known that I, AARON B. CARPENTER, of the city, county, and State of New York, builder, have invented, made, and applied to use certain new and useful improvements in the means of hanging and jointing the sort of sashes and doors technically known as "French sash-doors, double-casement sashes," and internal or external or other folding doors or similar parts of any building, whether glazed or not, the intent of said improvements being to allow a lateral motion to such sashes, casements, or doors by means of springs in or behind movable hanging stiles sliding in the jambs of the frames, so that the parts shall open or close without distress on the joints and meeting parts and when closed shall be kept tight together at the shutting joint. A second part of my improvements consists in a mode of applying a wind-stop beneath any door, however constructed, by placing a fillet in a groove, so as to be kept down on the threshold by expansive helical springs when shut, for which improvements I seek Letters Patent of the United States; and the said improvements and the mode of constructing and using the same and the effects attained thereby are fully and substantially set forth and shown in the following description and in the drawings annexed to and making part of this specification, wherein—

Figure 1, is a plan of part of a French window, shown as closed. Fig. 2, is a front, or inside elevation of the same, made only sufficiently high, to identify the mode of fitting the parts. Fig. 3, is a section of the lower rail, with the windstop fitted within it, and the same letters and numbers, as marks of reference, apply to the like parts in all the figures.

*a*, is the jamb, in the frame of either a door, or French or casement window.

*b*, is the outside stop bead, forming the interior rabbet and joint.

*c*, is the interior stop bead forming the finish, on the jamb inside.

1, is the hanging stile, 2, the shutting stile, 3., the lower rail, 4., the glass, and 5, the Gothic joint, of a pair of French sashes, or doors, shown as closed in place, and above the sill or threshold piece *d*., of the frame—all these may be prepared, and put together, in any of the usual and well known mechanical modes of doing such work, except, that the outside of the hanging stile of the door

is to have a segment of a circle, struck central with the hinge *e*, which part is to fall into a corresponding segment, on the inner edge of the outer stop bead *b*. The hinge *e*, is to have one leaf screwed on the edge of a rabbet, on the inner and hanging face of the stile 1., the other leaf of the hinge *e*, is to be screwed on to the outer edge of a sliding hanging stile *f*., which is to be placed partly in a vertical groove, or recess, made for it, in the jamb *a*., and partly in the rabbet on the inner and hanging face and edge of the stile 1.

*g*, is a screw put through the stile *f*., so as to enter, and hold, in the jamb *a*., the head of the screw is in a countersink to allow the lateral movement of the stile *f*, and on the inside of the stile *f*., a countersunk space receives on the screw shaft, an expansive helical spring *h*., which, in some cases may be enough to give the required lateral motion to the stile *f*, but where it is not, it is intended to place a contractile segment or crooked spring *k*, (shown by dotted lines in the Fig. 2,) between the back of the stile *f*., and the face of the recess or groove in the jamb *a*., to aid in throwing out the hanging stile *f*., after opening the door, or sashes, and to force the joint 5, close, on shutting them. The dotted diagonal radius line *l*, and the corresponding segmental lines, show the amount of lateral motion to be allowed for, in fitting the hanging stile *f*, and its screw and springs, so as that the doors, or sashes, shall open without any lateral compression, or distress among the parts, and allow of their closing, without jerking, or forcing the parts, as in the ordinary mode of fitting hitherto practised, which, in wet weather, is liable to fracture the glass, or hinges, or both. A small roller *i*, shown by dotted lines in Fig. 2, is to be fitted in the threshold *d*, under the foot of the hanging stile to allow of that moving without friction or noise and the foot of the stile *f*., may be shod with a thin metal plate, in any convenient way, and the screws *g*, when properly adjusted, carry the weight of the door, or sash, when open, by sustaining the stile *f*, effectively in place.

Fig. 3, shows sectionally the fillet *m*., in a groove in the under face of the lower rail 3, shown by dotted lines in Fig. 2. The fillet *m*., has holes through it, countersunk on each edge, the countersink beneath, allows the fillet to move on the heads of two, or more

screws, *n*, the upper countersinks each receive a helical expansive spring *o*., which, when the door is shut forces the fillet *m*, down on the threshold *d*., and makes a tight  
5 shut, that keeps out the wind, and when the door, or sash, is open, the screws *n*, properly adjusted, will keep the fillet *m*, just clear of the floor, or carpet, and as the end, under the hanging stile, is never entirely off the  
10 threshold, when the door or sash is open, so the other part will rise easily into place, when shutting. It will be seen that the making, and fitting, all these parts, will be within the capacity of general workmen, and  
15 that the arrangement furnishes easy access for adjustment, and repairs.

I do not mean to confine or limit myself to the number, or form, or material, used in, or of, the springs, screws, or hinges, or movable hanging stiles, or fillets, hereinbefore  
20 described and represented; nor do I limit myself to the sizes, or proportions, shown in the drawings, as it will be evident, to every competent mechanic, that all these must be  
25 varied, to suit the local peculiarities of each particular case, to which these new arrangements may be applied; and it will also be seen, that in large heavy and permanent work, the screws *g*, may be put in from the  
30 back of the jambs *a*., instead of entering from the front of the movable hanging stiles *f*., and in some cases the movable hang-

ing stiles *f*., may be made with male dovetail inner edges, to fit, and move, in a female dovetail groove, in the jamb *a*., though  
35 this mode may, perhaps, be most useful, in heavy, permanent, metal materials.

I do not claim to have invented any of the parts herein described and shown, except as follows:

I claim as new, and of my own invention, and desire to secure by Letters Patent,

The application of the movable hanging stile *f*., hinged in a rabbet in the doors or sash stile *l*., and steadied, in a groove in  
45 the jamb *a*., by screws *g*, either without, or in combination with, the springs *h*, and *k*, and roller *i*, and inclusive of any variations, arising from the nature of the particular  
50 case, when such application, and combination, or variations, for the purposes herein described, are substantially the same in construction and practical effect and shall be  
55 used in hanging, or mounting French sashes, casement windows, or folding doors, of any description, and for any purpose.

In witness whereof I have hereunto set my hand in the city of New York this sixth day of June in the year one thousand eight hundred and forty four.

AARON B. CARPENTER. [L. s.]

Witnesses:

W. SERRELL,  
EDWARD W. SERRELL.