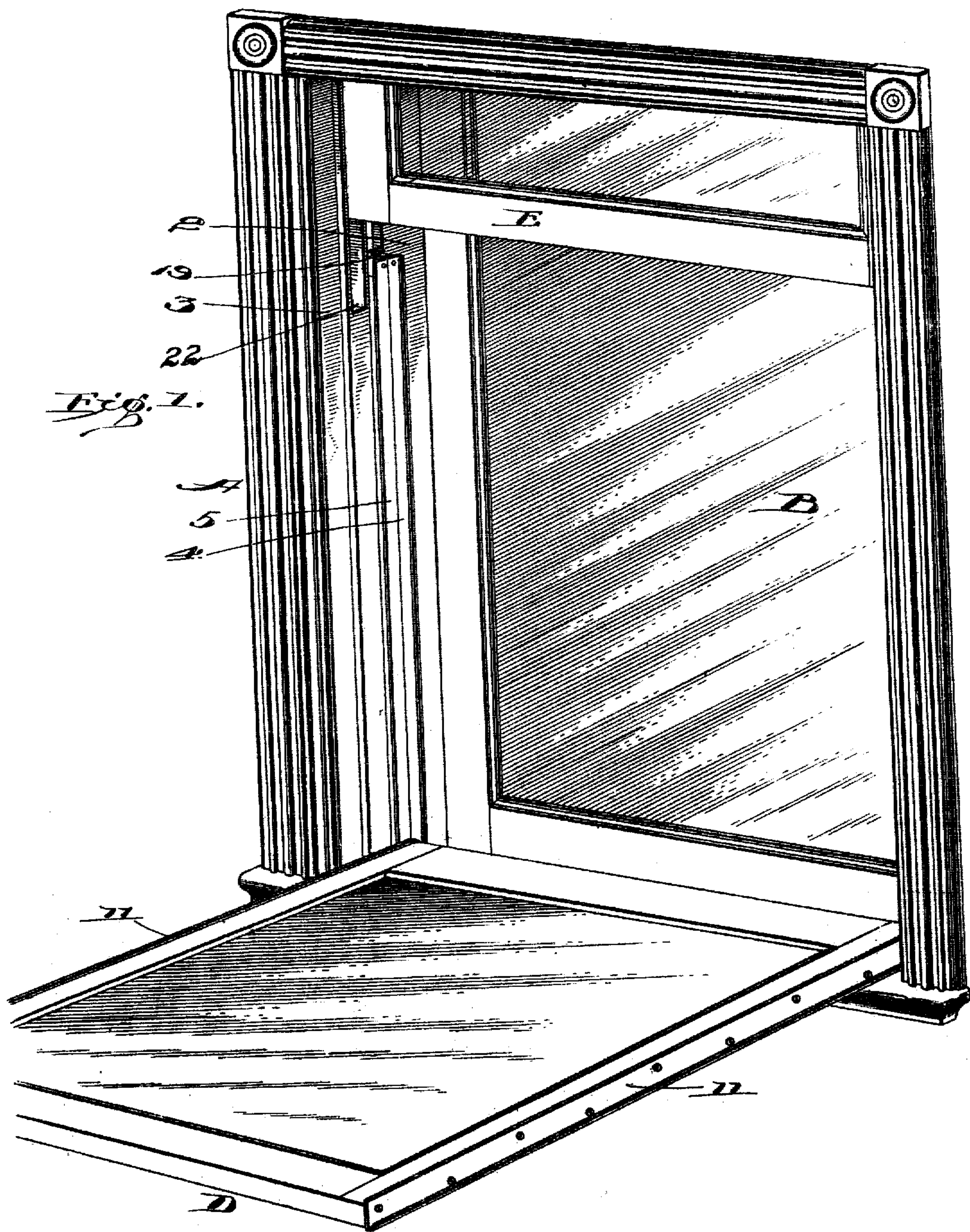


No. 814,315.

PATENTED MAR. 6, 1906.

G. H. PARKER.
SWINGING WINDOW.
APPLICATION FILED MAY 13, 1904.

2 SHEETS—SHEET 1.



WITNESSES:

Allen G. Gorse
Robert J. Blain

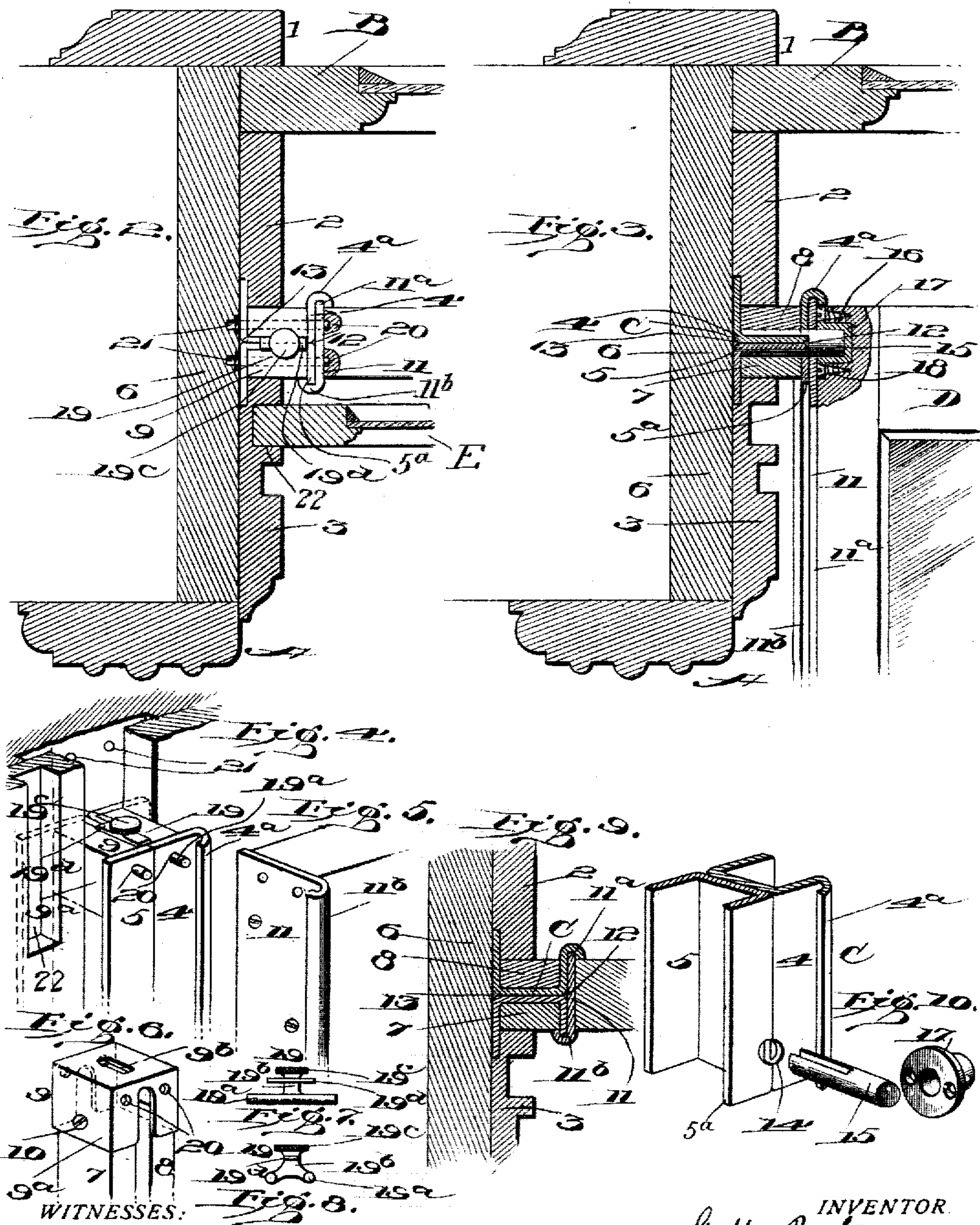
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APPLICATION FILED MAY 13, 1904.

2 SHEETS—SHEET 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE HENRY PARKER, OF NEW YORK, N. Y., ASSIGNOR TO CHARLES HEMINGWAY PLATT, OF NEW HAVEN, CONNECTICUT.

SWINGING WINDOW.

No. 814,315.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed May 13, 1904. Serial No. 207,774.

To all whom it may concern:

Be it known that I, GEORGE HENRY PARKER, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Swinging Windows, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the construction of swinging windows.

One of the objects thereof is to provide a simple and efficient construction whereby a window may be swung out of its normal path of travel.

Another object is to provide a construction of the above type wherein the joints between the relatively movable parts shall be tight, and also to provide means whereby any matter tending to pass these joints shall be deflected and carried away.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements, and arrangement of parts herein illustrated, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, which illustrate one of various possible embodiments of my invention, Figure 1 is a perspective view of a window embodying my invention, showing the same swung away from the frame. Fig. 2 is a section of the frame and associated parts, showing certain of the sashes in their normal position. Fig. 3 is a similar view showing the inner sash swung down from its normal position. Fig. 4 is a detail perspective view of a portion of the frame with an auxiliary sash member in position thereon. Fig. 5 is a similar view of a portion of the sash adapted to coact therewith. Fig. 6 is a similar view of a portion of the auxiliary sash member. Fig. 7 is a side elevation of a locking-bolt. Fig. 8 is an end elevation of the same. Fig. 9 is a cross-section of the frame with the auxiliary sash in place thereon. Fig. 10 is a detail perspective of parts of the auxiliary sash and a pivotal connection for the same.

Similar reference characters refer to similar parts throughout the several views.

In windows of this general type which are in common use on railway-carriages and other vehicles difficulty has been found in washing the glass, and such constructions have also been defective in that cinders and other foreign bodies are likely to work through the joints between the same and the window-frame. One of the aims of this embodiment of my invention is to provide a construction wherein the above defects shall be remedied.

Referring now to Fig. 1, A represents the frame of a window of the double-sash type common in railway-carriages, to which the several features of this invention are peculiarly applicable, though they may obviously be used in other relations. The outer sash B is adapted to reciprocate in this frame between rear stops 1 and parting-strips 2 in the ordinary manner. Guided by parting-strips 2 and front stops 3 are what may be termed "auxiliary sash members" C, of which, as both with their associated parts are identical, one only will be described.

The term "auxiliary sash member" is used throughout the following claims in a broad sense as denoting any member adapted to coact with a sash and to have a sliding movement within and guided by a frame. This member comprises two channel-shaped strips 4 and 5, preferably stamped out of sheet metal and placed with their connecting-webs in contact, as shown in Fig. 10. Two adjacent flanges of these strips extend in the same plane and are adapted to rest against the sash-stile 6 with the ends in recesses rabbeted in parting-strips 2 and front stops 3. The other two flanges are adapted to lie in a plane parallel to the sash-stile, and that of the outer member 4 is curved inwardly, as shown at 4^a for a purpose hereinafter described. Within the channel-shaped strips are adapted to lie filler-blocks 7 and 8, held in position at their upper ends in cap 9, hereinafter more particularly described, by means of screws 10.

Positioned between auxiliary sash members C is a sash D. This sash is provided on its lateral edges with strips or "shields" 11, projecting outward slightly beyond the outer surface of the sash, as shown at 11^a, and having an inwardly-extending curved edge 11^b. The portion 11^b is adapted when in normal

position to embrace the projecting edge 5^a of member 5 and rest against the filler-block 7, and the straight projecting portion 11^a is adapted to be engaged by the curved edge 4^a of member 4 in a similar manner. It may here be noted that small openings 12 and 13, approximately triangular in cross-section, are formed by the curved corners of the channel-shaped members 4 and 5 and the adjacent surfaces of shield 11 and stile 6. These openings or "wells" extend from the top to the bottom of members C and serve to carry away any dust or cinders which might possibly pass the closely-contacting surfaces which lie outside the same.

At the lower portion of member C the adjacent flanges of strips 4 and 5 are cut away, as shown in Fig. 10, so as to form an opening 14, adapted to receive the ends of the slotted pivot-pin 15. These ends are adapted to lie upon either side of and in contact with the connecting webs or strips 4 and 5 and fit snugly within corresponding recesses in the filler-blocks 7 and 8. Opposite this pivot upon sash D an opening 16 is cut in shield 11 and a socket 17 is let into the sash beneath the shield and registering with the opening therein, the parts being held in position by means of countersunk screws 18. Pin 15 is adapted to rest in socket 17 and with the corresponding identical construction upon the opposite side of the window forms a pivotal connection, about which the sash D may be rotated, as shown in Fig. 1.

Cap 9, before referred to, is provided with depending walls 9^a, adapted to embrace filler-blocks 7 and 8, the front and rear walls being perforated for screws 10 and the lateral walls being cut away so as to straddle the connecting-webs of strips 4 and 5. The filler-blocks 7 and 8 terminate a short distance below the top of cap 9, and in the chamber thus formed is positioned a bolting member 19. This member comprises bolts 19^a, adapted to reciprocate within the cap through the aligned openings 20 in the cap 9 and corresponding perforations in the flanges of strips 4 and 5. Bolts 19^a are connected by a post 19^b, terminating in a head 19^c. The latter is adapted to pass through a slot 9^b in the cap 9 and is provided with a slide 19^d, adapted in any position of the bolts to cover the slot and prevent the entry of foreign matter within the cap. As the bolts 19^a are longer than the combined thickness of the parts of the auxiliary sash member through which they pass, they normally engage recesses 20 in sash D, thus holding the same, in connection with the previously-described pivots 15, in close engagement with those members. While in this condition the sash and auxiliary sash members may be reciprocated within the frame A, guided by the parting-strips 2 and front stops 3 in the ordinary manner. At a certain point

in stile 6, preferably corresponding to an elevation of the sash at which it would not ordinarily rest—as, for example, half an inch above its lowermost position—are openings 21, adapted to receive the ends of the bolts.

Positioned above and within sash D and slidable in the ways 22 is a sash E. This sash, as shown in Fig. 1 of the drawings, is adapted to pass below and overlap the upper end of sash D when the latter is in its normal closed condition. The space between the outer surface of the lower cross member of sash E and the inner surface of upper cross member of sash D may be filled in any desired manner, this filling not being shown, as it forms no part of the present invention.

The operation of the above-described embodiment of my invention is as follows: With the parts in the normal position shown in Fig. 2 sash D is locked by the bolting members 19 to the auxiliary sash members C. In this position the above parts may together be used as an ordinary sash, and on account of the above-described features forms a tight joint with the frame A and yet may easily be moved therein. Moreover, the chance of the bolts jarring out of engagement with the sash D is reduced to a minimum, as it is necessary to exactly position the sash in order to render such movement possible. When it is desired to swing the sash, as for washing or other purposes, it is raised into the position in which bolts 19^a are opposite openings 21 in stile 6, which position may be indicated in any desired manner in order to render the same readily found. Upper sash E is then slightly raised and bolts 19^a are slid into these openings by means of head 19^c, the same movement freeing the upper end of sash D. The latter is then swung about pivots 15 to any desired position, preferably resting against the sill of the window, as shown in Fig. 1. In this position both surfaces of sash D and the inner surface of sash B are readily accessible, as will be obvious from the drawings. When it is desired to restore the sash to normal position, a reverse series of operations is performed. It will thus be seen that I have provided a simple and efficient means of accomplishing the objects of this invention and remedying many of the defects of former constructions. The several parts also are inexpensive and may be assembled by comparatively unskilled labor. Moreover, the same may be applied to windows now in use with slight and obvious changes. On account of the peculiar construction of the joints they are not only substantially dirt and cinder proof, but no considerable quantity of air can pass through the same, and the rattling of the parts is prevented. Also the several parts are securely held together, and the chances of the sash accidentally becoming loose and swinging down are reduced to a minimum.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. It will also be understood that the invention here set forth could be utilized in various relations as a combined weather-strip and hinge for doors, hatches, and other similar devices, and where in the claims I use the terms such as "frame," "sash," and the like such terms are used broadly as referring to the permanent and movable members of this general class of devices. I desire it also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a device of the class described, in combination, a plurality of relatively movable members, a strip upon each of said members adapted to rest in contact, the edge of one of said strips being bent so as to embrace the adjacent edge of the other and the remaining edge of said second-mentioned strip being turned so as to embrace the adjacent edge of said first-mentioned strip, and the central portion of the surface of one of said strips being out of contact with the adjacent strip.

2. In a device of the class described, in combination, a sash member, auxiliary sash members, said sash member and said auxiliary sash members being relatively movable with respect to each other, a plurality of strips upon one of said members, said strips being so joined as to form a longitudinal recess therebetween, and stripping upon the other of said members, the stripping upon each of said members being adapted to lie in contact with the stripping upon the other of said members.

3. In combination, a window-frame, a member adapted to reciprocate therein, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and guiding members between which said first-mentioned member is adapted to reciprocate, said flanges being locked in position by said guiding members.

4. In combination, a window-frame, a member adapted to reciprocate therein, said member comprising two channel-shaped

parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and adapted to engage said frame and guiding members between which said first-mentioned member is adapted to reciprocate, said flanges being locked in position by said guiding members.

5. In combination, a window-frame, and a member adapted to reciprocate therein, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and adapted to engage said frame and the remaining two flanges adapted to extend in a parallel plane, said flanges projecting outwardly in opposite directions and being positively held in contact with said window-frame by the parts beyond which they project.

6. In combination, a window-frame, a sash, and a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact, two of their flanges extending in substantially the same plane and engaging said frame and the remaining two flanges extending in a parallel plane and engaged by said sash.

7. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and engaging said frame and the remaining two flanges extending in a parallel plane, and a strip upon said sash engaging one of said flanges and engaged by the other thereof.

8. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and engaging said frame, and the remaining two flanges extending in a parallel plane, and a strip upon said sash engaging one of said flanges and engaged by the other thereof, the parts being so related as to form a well between said frame and said member.

9. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and engaging said frame and the remaining two flanges extending in a parallel plane, and a strip upon said sash engaging one of said flanges and engaged by the other thereof, the parts being so shaped and related as to form a well between said member and said sash.

10. In combination, a window-frame, an auxiliary sash member adapted to reciprocate

cate therein, a sash, a cap upon said auxiliary member, and a bolt within said cap adapted to occupy two alternative positions in one of which it locks said auxiliary member to said frame and in the other of which it locks said sash to said auxiliary sash member.

11. In combination, a window-frame, an auxiliary sash member adapted to reciprocate therein, a sash, a cap upon said auxiliary member, a bolt within said cap adapted to occupy two alternative positions in one of which it locks said auxiliary member to said frame, and in the other of which it locks said sash to said auxiliary sash member, and a head projecting through a slot in said cap whereby said bolt may be moved.

12. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and engaging said frame and the remaining two flanges extending in a parallel plane, a strip upon said sash engaging one of said flanges and engaged by the other thereof, and a pivotal connection between said sash and said auxiliary sash member.

13. In combination, a window-frame, an auxiliary sash member adapted to reciprocate therein, a sash pivotally connected to said auxiliary sash member, means adapted to occupy two alternative positions in one of which it locks said auxiliary member to said frame and in the other of which it locks said sash to said auxiliary sash member and mutually-embracing strips interposed between said sash member and said sash said means being adapted to project through said mutually-embracing strips.

14. In a device of the class described, in combination, a plurality of relatively movable members, a strip upon each of said members, the edge of one of said strips being bent so as to embrace the adjacent edge of another of said strips and the remaining edge on said second-mentioned strip being bent about the remaining edge of said first-mentioned strip and a pivotal connection between said members, said strips being free from contact one with another at their central portions.

15. A sash member comprising two channel-shaped members lying with their connecting-webs in contact and each having fixed therein a separate filler-block.

16. In combination, a sash member comprising two channel-shaped members lying with their connecting-webs in contact, guiding members and filler-blocks within said channel-shaped members resting in contact with said guiding members.

17. In combination, a frame, a sash member comprising two channel-shaped members

lying with their connecting-webs parallel and their adjacent flanges engaging said frame, guiding members and filler-blocks interposed within said channel-shaped members adapted to rest against said guiding members.

18. In combination, a frame, sash members comprising two channel-shaped members lying with their connecting-webs parallel and their flanges resting against said frame and a sash pivotally mounted between the said sash members and adapted to engage the remaining flanges thereof.

19. In combination, a frame, sash members comprising two channel-shaped members lying with their connecting-webs parallel and their adjacent flanges resting against said frame, a sash pivotally mounted between the remaining flanges of said sash members, strips upon said sash and a curved edge upon one of the flanges of each of said sash members adapted to engage the projecting edge of the corresponding strip.

20. In combination, a frame, two sash members each comprising two channel-shaped members lying with their connecting-webs parallel and each having adjacent flanges engaging said frame, a sash pivotally mounted between the remaining flanges of said sash members, and strips upon said sash one edge of each of which is embraced by the adjacent edge of the corresponding sash member and the other edge of each of which embraces the adjacent flanged sash member corresponding thereto.

21. In combination, a frame, sash members within said frame each comprising two channel-shaped members lying with their connecting-webs parallel and having adjacent flanges resting against said frame, a sash pivotally mounted between the remaining flanges of said channel-shaped members, and strips upon said sash interposed between said flanges and said sash, said flanges and said sash being so related as to form openings substantially parallel to said sash members.

22. In combination, a frame, two sash members within said frame comprising two channel-shaped members lying with their connecting-webs substantially parallel and their adjacent flanges resting against said frame, filler-blocks within said channel-shaped members, guiding-strips on said frame engaging said filler-blocks, and a sash pivotally mounted between the remaining flanges of said channel-shaped members said channel-shaped members being so shaped as to provide an opening between their inner surfaces and said sash which is substantially parallel to said sash members.

23. In combination, a frame, sash members mounted within said frame each comprising two channel-shaped members lying with their connecting-webs in contact, guiding-strips on said frame, filler-blocks within

said channel-shaped members resting against said guiding-strips, a sash member pivotally mounted between the remaining flanges of said channel-shaped members and strips upon the outer surface of said sash one edge of each of said strips being embraced by the adjacent flange of the corresponding channel-shaped member and the other edge of each of said strips embracing the adjacent flange of the corresponding channel-shaped member and said strips and flanges being so related as to provide openings substantially parallel to said sash members.

24. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane, and a pivot straddling said connecting-webs and engaging a socket in said sash.

25. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and the remaining two flanges extending in a parallel plane, a strip upon said sash engaging one of said flanges and engaged by another thereof, the parts being so shaped and related as to form a well between said frame and said member, and a pivot straddling said connecting-webs and engaging a socket in said sash.

26. In combination, a window-frame, a sash, a member adapted to reciprocate in said sash, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and engaging said frame, and locking means carried by said auxiliary member alternatively engaging said frame and said sash.

27. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane, and a pivot straddling said connecting-webs and engaging a socket in said sash, said sash being adapted to rotate with respect to said auxiliary sash member about said pivot.

28. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane and engaging said frame and the two remaining flanges extending in a parallel

plane, a strip upon said sash engaging one of said flanges and engaged by the other thereof, a pivotal connection between said sash and said auxiliary sash members, and locking means carried by said auxiliary members engaging said sash.

29. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane, a pivot straddling said connecting-webs and engaging a socket in said sash, and locking means carried by said auxiliary member adapted alternatively to engage said frame and said sash.

30. In combination, a window-frame, a sash, a member adapted to reciprocate in said frame, said member comprising two channel-shaped parts lying with their connecting-webs in contact and two of their flanges extending in substantially the same plane, a pivot straddling said connecting-webs and engaging a socket in said sash and permitting the same to be swung about a horizontal axis, and locking means carried by said auxiliary member adapted alternatively to engage said frame and said sash.

31. In window construction, in combination, a plurality of relatively movable members and stripping upon each of said members, the edge of the stripping upon one thereof embracing the edge of that upon the other, the stripping upon said members being free from contact at the central portions thereof.

32. In combination, a window-frame, a member adapted to reciprocate in said frame, a member pivotally connected therewith, a cap upon said first-mentioned member, a bolt within said cap adapted to occupy two alternative positions in one of which it locks said first-mentioned member to said frame, and in the other of which it locks said first and second members and means projecting through said cap, whereby said bolt may be actuated.

33. In combination, a window-frame, and members slidably mounted within said frame, a sash positioned between said members and pivotally connected with each of the same, caps upon said members at the upper ends thereof, bolts within said caps, each adapted to occupy two alternative positions in one of which it engages said sash, and in the other of which it engages said window-frame, and means projecting through the said caps whereby said bolts may be actuated.

34. In combination, a window-frame, and members slidably mounted within said frame, a sash positioned between said members and pivotally connected with each of the

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frame, and means projecting through the
said caps whereby said bolts may be actu-
ated, said sash and said members being pro-

vided with interlocking weather-stripping
through which said bolts are adapted to pass. 10

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

GEORGE HENRY PARKER.

Witnesses:

H. M. SEAMANS,

J. B. KNOX.