(No Model.)

W. NICOL.

WEATHER PROOF FITTING FOR WINDOWS.

No. 601,081. Patented Mar. 22, 1898.

FIG. 19.

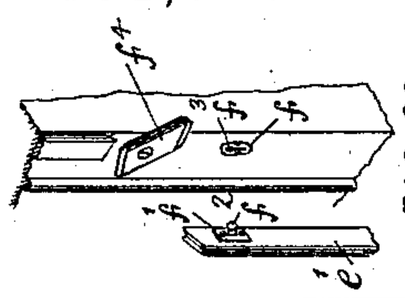


FIG. 20.

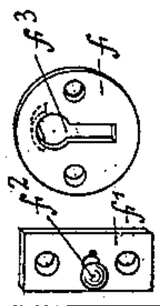


FIG. 16.

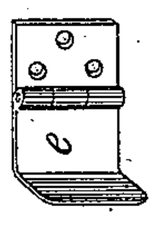


FIG. 10.

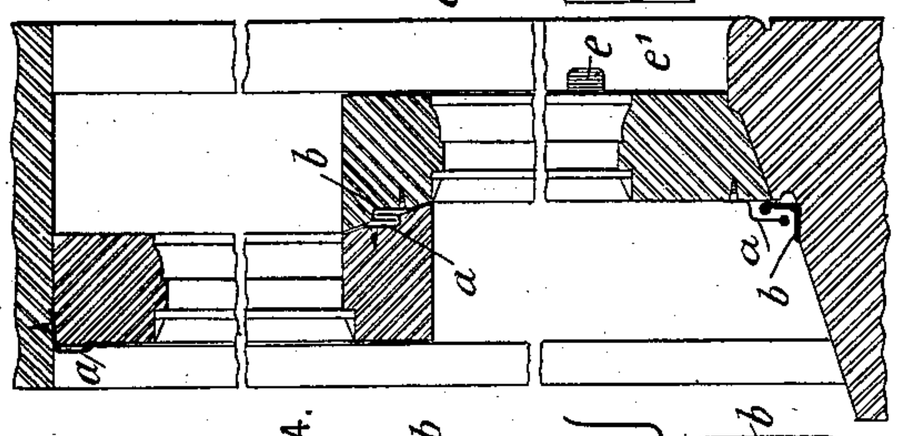


FIG. 13.

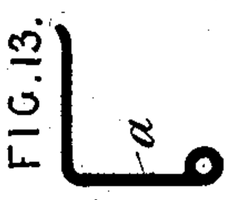


FIG. 14.

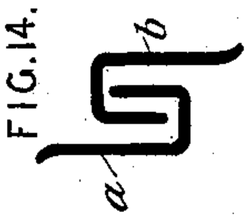


FIG. 15.

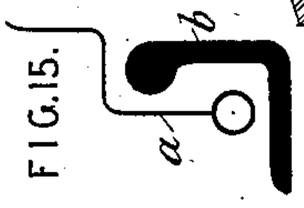


FIG. 11.

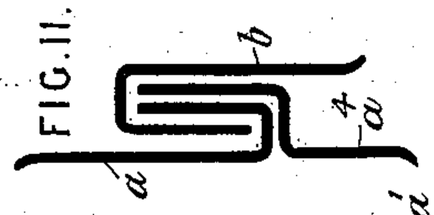


FIG. 12.

FIG. 9.

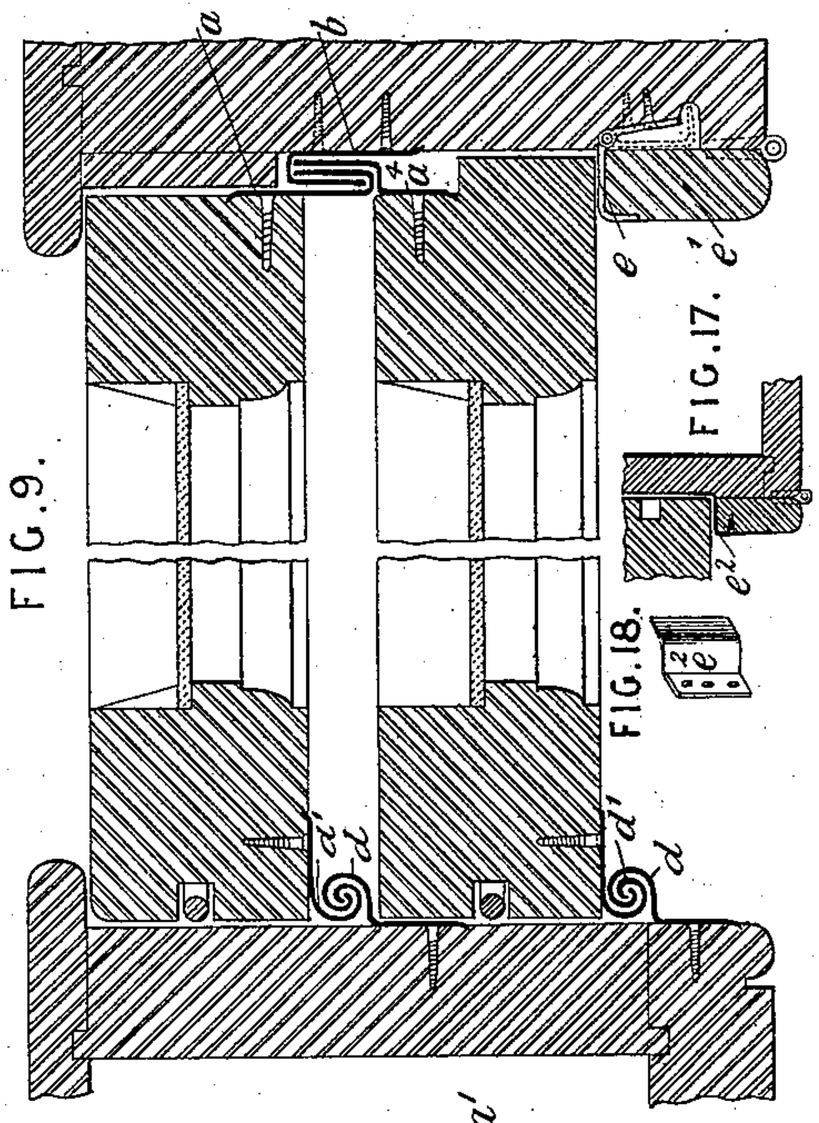


FIG. 17.

FIG. 18.

FIG. 2.

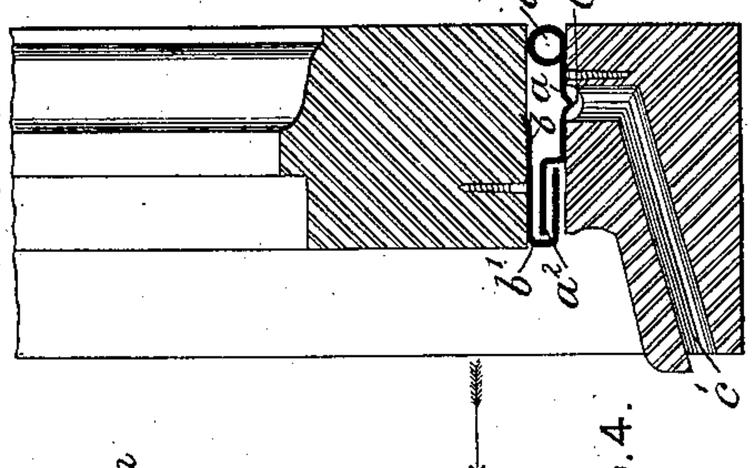


FIG. 4.

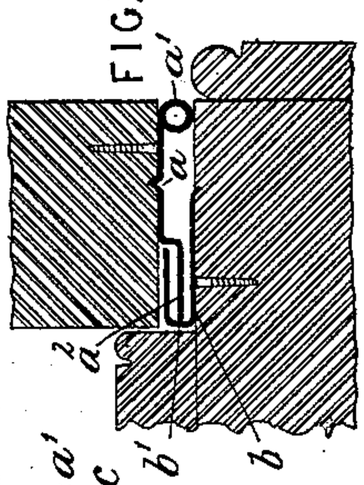


FIG. 3.

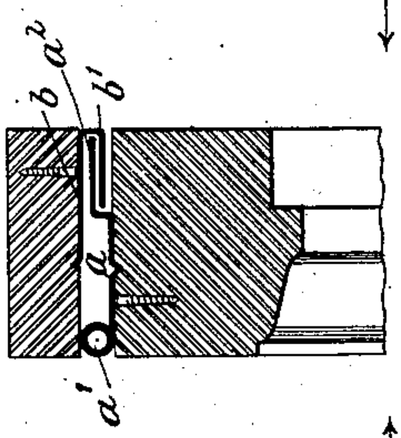


FIG. 1.

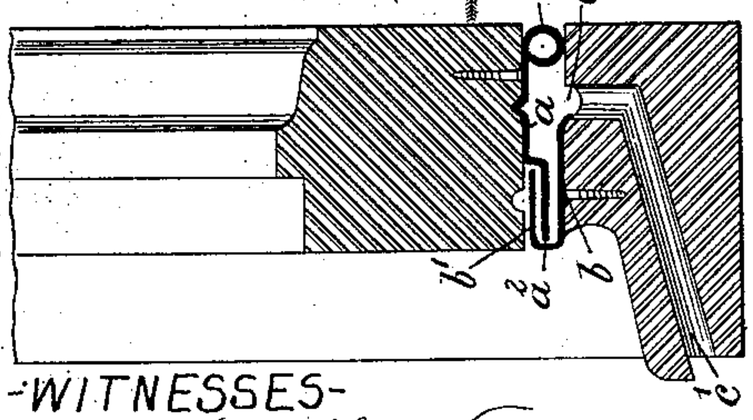


FIG. 5.

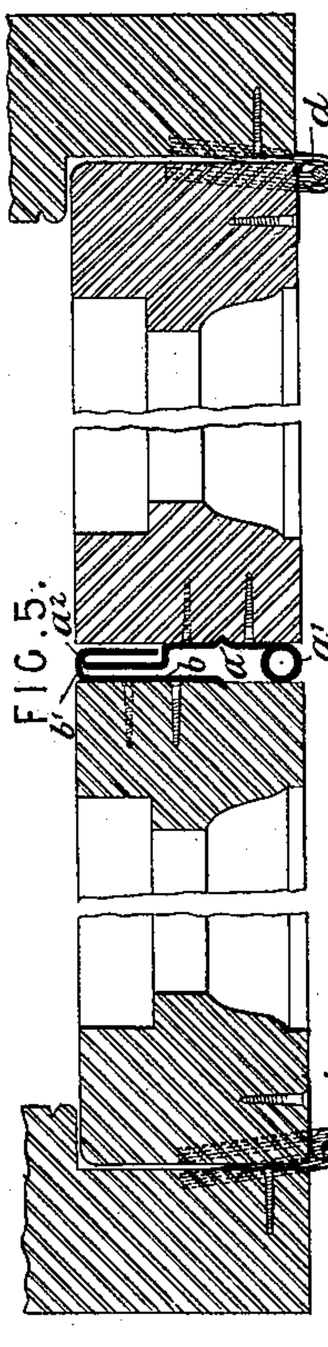


FIG. 6.

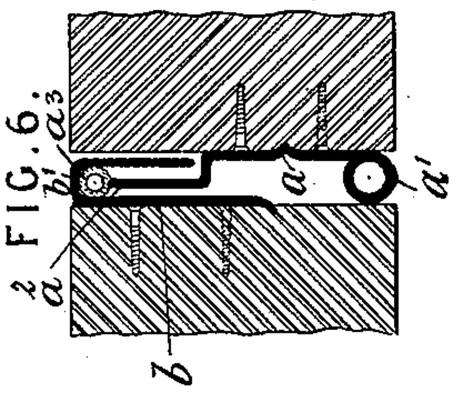


FIG. 7.

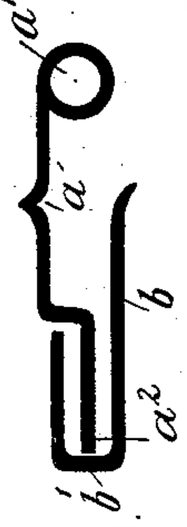
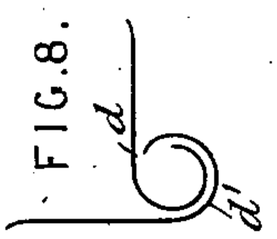


FIG. 8.



-WITNESSES-
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M. E. Durand

INVENTOR
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BY Howson & Howson,
HIS ATTORNEYS-

UNITED STATES PATENT OFFICE.

WILLIAM NICOL, OF GLASGOW, SCOTLAND.

WEATHERPROOF FITTING FOR WINDOWS.

SPECIFICATION forming part of Letters Patent No. 601,081, dated March 22, 1898.

Application filed April 30, 1897. Serial No. 634,588. (No model.) Patented in England December 19, 1893, No. 24,380; February 28, 1894, No. 4,236; April 5, 1894, No. 6,764, and November 15, 1894, No. 22,077.

To all whom it may concern:

Be it known that I, WILLIAM NICOL, a subject of the Queen of Great Britain and Ireland, residing at Glasgow, Scotland, have invented certain new and useful Improved Weatherproof Fittings for Windows, (for which I have obtained patents in Great Britain, No. 24,380, dated December 19, 1893; No. 4,236, dated February 28, 1894; No. 6,764, dated April 5, 1894, and No. 22,077, dated November 15, 1894,) of which the following is a specification.

This invention has reference to an improved method of rendering windows wind and water tight.

My improvements essentially comprise a system of overlapping plates which would be fitted at the bottom, top, meeting edges, and sides of the window to render same weatherproof.

In order to enable others skilled in the art to which my invention relates, I have hereunto appended a sheet of explanatory drawings, in which the same reference-letters are used to indicate corresponding parts in the several figures where shown.

Figures 1 and 2 are sectional elevations showing my improved system of overlapping plates as fitted to the bottom part of a casement-window. Fig. 3 is a sectional elevation showing same applied to the top part of a window. Fig. 4 is a sectional plan view showing the plates as fitted to edge of window. Fig. 5 is a sectional plan view showing the plates as fitted to the meeting stiles of a window and to the hinged sides. Fig. 6 is a detached sectional plan view of the plates fitted to meeting stiles, slightly modified from that shown in Fig. 5. Fig. 7 is an enlarged view of the overlapping plates detached, and Fig. 8 shows the form of plates when fitted at the hinged parts of window. Fig. 9 is a sectional plan view of a sliding-sash window as fitted with my improved arrangement of plates. Fig. 10 is a sectional elevation corresponding to Fig. 9, and Figs. 11 to 20 show detached views of details of the improved fittings.

Referring to the drawings, as shown in Fig. 1 the plate a is formed with a bead a' and a kneed part a^2 and screwed to the lower end of window, and the plate b is screwed to fixed sill of window and formed with a hooked part b' to overlap the part a^2 of plate a. The air-space formed by the bead at one end and the knee at the other entirely prevents water entering by capillary attraction and is the principal factor in making the joint draft and dust proof. A water-channel c, with a drain-hole c' a few inches from either end, is formed in the sill. In the arrangement shown in Fig. 2 the plates $a\,b$ are simply reversed in position to enable window to open outward instead of inward, as in Fig. 1. In the arrangement shown in Fig. 3 the same arrangement of plates $a\,b$ are shown as fitted to the top part of window, and in Fig. 4 these plates are shown as fitted to the edge of a window. In Fig. 5 these plates $a\,b$ are shown as fitted to the meeting stiles of window, these plates $a\,b$ being shown to an enlarged scale detached in Fig. 7. This enables me to dispense with rabbets in the wood, the added strength of the section allowing a great reduction in the wood and consequently allowing more light to enter the apartment. In Fig. 6 the plates $a\,b$ are substantially the same as in Fig. 5, except that a flexible tube a^3 is shown as fitted within the hooked part b' of the plate b to render the joint perfectly air-tight. In Fig. 8 the overlapping plates $d\,d'$ are curved so as to be used in conjunction with ordinary butt-hinges to render same weatherproof, and are shown as such in Fig. 5. In Fig. 9 these plates $d\,d'$ are shown applied to a sliding-sash window, thereby acting as guides instead of the usual batten-rod and parting-bead, and enables the sash-frames to be swiveled within the apartment, the sashes being hung with weights and cords on one side only. These plates $d\,d'$ are shown detached in Fig. 12. In this arrangement of Fig. 9 the plate b would be screwed to fixed frame at opposite side to the plates $d\,d'$, and the plate a would be screwed to top sash, while the plate a^4 would be screwed to bottom sash, these plates being shown detached in Fig. 11.

In Fig. 10 is shown a sectional elevation of sliding sashes and as fitted with modified con-

structions of overlapping plates at top, meeting-rails, and at sill, as shown to an enlarged scale detached in Figs. 13, 14, and 15.

In Fig. 16 is shown an enlarged view of the hinged plate *e* for securing the batten-rod *e'*. (Seen in plan view in Fig. 9.)

In Figs. 17 and 18 a kneed plate e^2 is shown instead of the hinged plate *e*.

In Figs. 19 and 20 studs and plates are shown for securing the batten-rod *e'* when the latter is not hinged. These plates consist of a disk *f*, screwed to fixed frame, and a plate *f'*, screwed to batten-rod, the latter having a knob f^2, which enters slot f^3 in the plate *f*. A swiveling turning-piece f^4 is fitted to enable the batten-rod to be lifted out.

What I claim is—

1. Weatherproof fittings for windows, consisting of overlapping plates, one plate fastened to one part and another plate fastened to another part, said plates being formed, one with a knee and bead and the other with a hook to receive the knee, so as to dispense with the usual wooden rabbets, prevent capillary attraction and strengthen the wood, substantially as set forth.

2. Weatherproof fittings for windows, consisting of two overlapping plates, said plates being formed with beads, hooks and kneed parts, said parts also forming an air-chamber, in combination with a sill to open inward or outward, substantially as set forth.

3. In weatherproof fittings for windows, duplex overlapping plates curved as described, to act as vertical guides and as swivels, in combination with overlapping plates at the opposite side of the window, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM NICOL.

Witnesses:
R. C. THOMSON,
WM. RUTHERFORD.