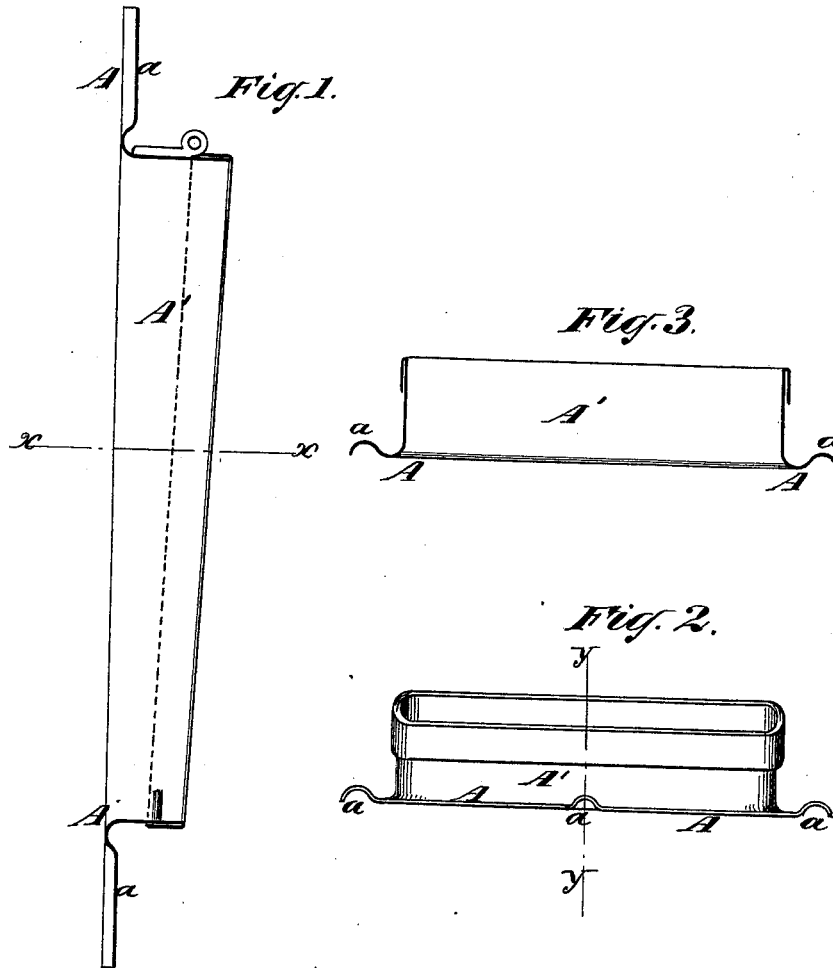


J. HILGERS.
Sheet-Metal Window-Frame.

No. 213,654.

Patented Mar. 25, 1879.



Witnesses

John Beecher
Fred. Haynes

Inventor

Jacob Hilgers
by his Attorneys
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UNITED STATES PATENT OFFICE.

JACOB HILGERS, OF RHEINBROHL, PRUSSIA.

IMPROVEMENT IN SHEET-METAL WINDOW-FRAMES.

Specification forming part of Letters Patent No. **213,654**, dated March 25, 1879; application filed May 1, 1878.

To all whom it may concern:

Be it known that I, JACOB HILGERS, of Rheinbrohl, in the Kingdom of Prussia, have invented certain Improvements in Sheet-Metal Frames for Windows, Ventilators, Skylights, and the like; and I do hereby declare that the following is a full and exact description of said improvements, reference being had to the accompanying drawings, forming part of this specification.

The invention consists in the construction of the frame for a window, ventilator, skylight, or the like, with its base and outward-projecting flange formed out of one single piece of sheet metal.

The invention has for its object the prevention of leakage, and to produce a frame which shall not crack or break under the influence of varying temperature or extra stress.

In the accompanying drawings, Figure 1 represents a section of my improved frame on the line *yy* in Fig. 2. Fig. 2 is an end view of my improved frame, and Fig. 3 is a section of the same on line *xx* in Fig. 1.

A is the base of the frame, of any suitable shape. A' is the projecting flange or raised portion of the frame, which serves to support the window, ventilator, skylight, &c.

The base and frame are formed out of a single piece or sheet of metal, by either hammering, spinning, pressing, or by means of a drop-hammer. In this manner I produce a seamless frame,

which, for better protection, may be galvanized when formed of corrosive metal—as, for instance, sheet-iron. Such frame will not be liable to leakage, as it does not present any seams for the falling rain or moisture collecting on the roofs or walls to pass through.

For the purpose of strengthening the base A of my sheet-metal frame, I corrugate the same, as shown at *aa* in the drawings; but I do not consider these corrugations as absolutely necessary. I also may bend the edge of the projecting flange, or strengthen it in any other suitable way, for the purpose of forming a better rest for the window-sash, ventilator, or skylight, for the attachment of which suitable hinges or other devices can be fastened to the projecting flange A'.

A frame constructed in accordance with my principle is adaptable to any kind or shape of roofs or walls, and will prevent any leakage to which frames of different construction have been subjected.

I claim—

As a new article of manufacture, a window, ventilator, or skylight frame consisting of the base A and projecting flange A', struck up from a single piece of sheet metal, substantially as and for the purpose described.

JACOB HILGERS.

Witnesses:

PETER BARTHEL,
LOUIS BASSE.