

No. 741,545.

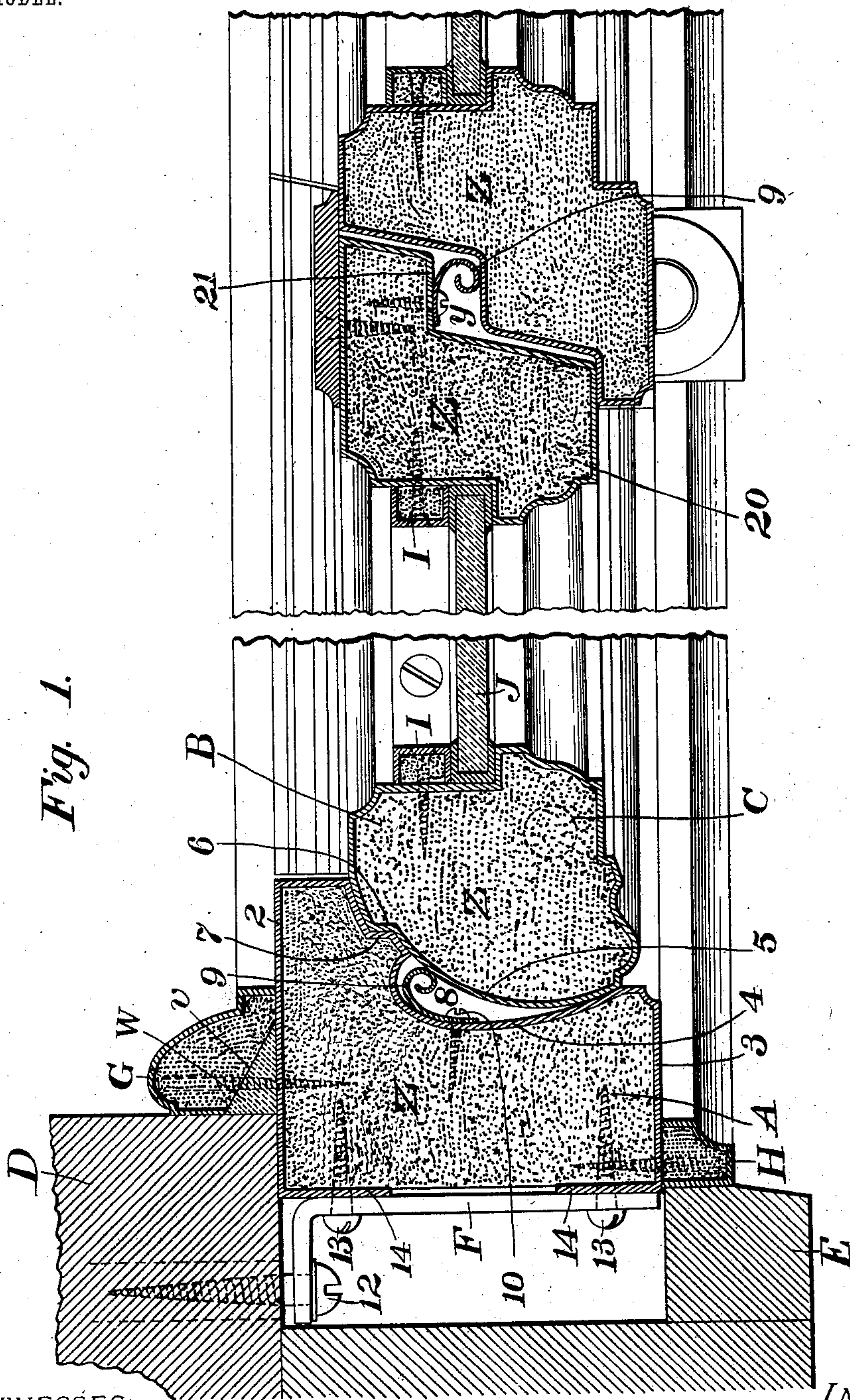
PATENTED OCT. 13, 1903.

N. POULSON.
METALLIC FINISH FOR BUILDINGS, &c.

APPLICATION FILED DEC. 3, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

Percy C. Bowen
A. M. Gillman, Jr.

INVENTOR
Niels Poulson
BY *Inter Freeman*
Attorneys

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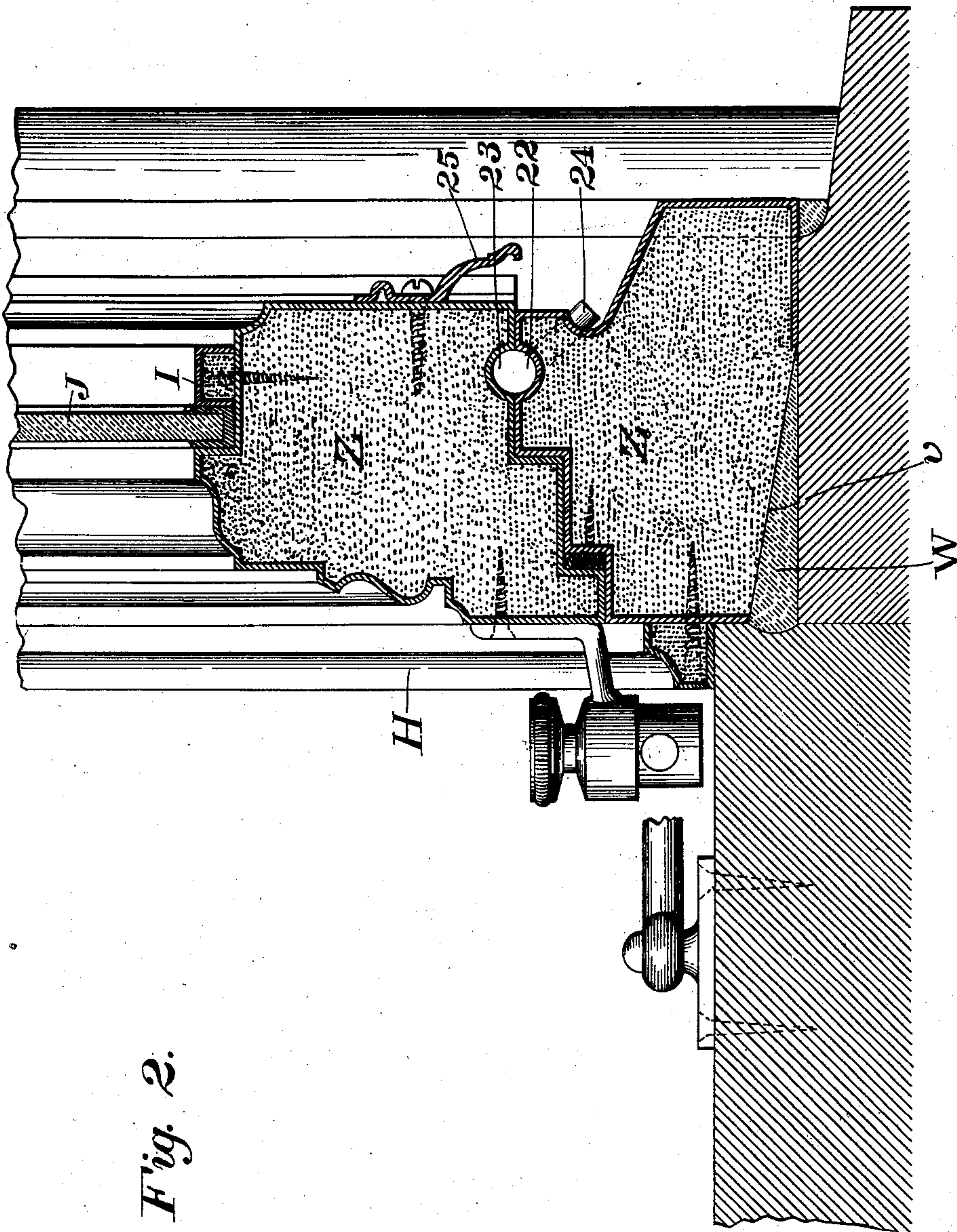


Fig. 2.

WITNESSES:

Percy C. Bowen.
Wm. Gillman, Jr.

7-10 INVENTOR

INVENTOR
Niels Poulsen
BY: Foster & Freeman
Attorneys

Attorney's

UNITED STATES PATENT OFFICE.

NIELS POULSON, OF BROOKLYN, NEW YORK.

METALLIC FINISH FOR BUILDINGS, &c.

SPECIFICATION forming part of Letters Patent No. 741,545, dated October 13, 1903.

Application filed December 3, 1902. Serial No. 133,766. (No model.)

To all whom it may concern:

Be it known that I, NIELS POULSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Metallic Finish for Buildings, &c., of which the following is a specification.

My invention relates to metallic structures as a substitute for wooden structures heretofore employed in building furniture, &c.; and it consists in constructing the members of bent hollow strips containing a pervious non-friable filler and in details of construction fully set forth hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a horizontal section of sufficient of a window-frame having a swinging sash to illustrate my invention. Fig. 2 is a vertical section through the lower part of the sash and sill.

The side frames A consist each of a strip of bent or drawn metal having three sides 2 3 4, the outer side 2 and inner side 3 being generally flat and parallel and the sash side 4 being adapted to the sash-frame B. As shown, the sash-frame is intended to swing, and the side 4 is therefore curved inward to meet at one or more points the curved side 5 of the sash-frame, the curvatures corresponding to a circle having its center eccentric to that of the pivots C of the swinging frame to insure a quick opening. To form a substantial stop limiting the outward swing of the sash-frame, the latter is provided with a shoulder 6, which abuts against one side of a rib 7, formed by longitudinally bending the side 4 of the window-frame. To effectually seal the joint between the parts, one of the frames—for instance, the window-frame—has its side bent inward, forming a recess 8 to receive a spring sealing-strip 9, consisting of a strip of flexible metal bent transversely to coincide with a volute, the coiled end of which lies against the side 5 of the sash-frame, while the flat end is secured by screws 10 to the window-frame. This strip is in yielding contact with the sash-frame and effectually excludes both wind-currents and water.

The window-frame is secured between the stone lintel D and the inside trim E by means of L-shaped brackets F, each of which is se-

cured by a screw 12 to the lintel and by screws 13 to inwardly-projecting ears 14 of the window-frame.

The outside moldings G and inside moldings H and retaining-strips I for the glass J each, like the window-frame A, consist of a three-sided drawn-metal strip solidified and strengthened by a composition filling Z, of a material which is plastic or can be made into a paste and which after its introduction will become hard, its outer face thus constituting the back face or side of the composite strip. The solidified material must be capable of being readily perforated by screws, yet must be non-friable—that is, it must not crumble when perforated—so as to solidly engage the screw-threads and hold the screws as they are held by the fibers of wood. I have found by extended use that a material suitable for this purpose is lignolith, a composition of chlorid and oxid of manganese and fibrous material; but any perforable non-friable filler may be used. Preferably the non-metallic side of the strip is placed against the supporting part of the structure.

All the members of the sash-frame are metallic drawn or bent metal filled tubes, the outer member 20 being formed to present a rib 21, between which and the meeting member of the adjacent sash or frame is a space y, in which is a sealing-strip 9.

It has been found extremely difficult to prevent the entrance of water between sills and the lower rails or members of a swinging sash. To obviate this difficulty, I make a longitudinal groove 22 in the sill and preferably a corresponding groove 23 in the lower face of the sash, although this may be omitted, and from the groove 22 I extend downward channels 24, open at their lower ends. Thus if water enters below the sash it flows into the sill-groove and outward. A further protection is afforded by an outwardly and downwardly extended hood 25, secured to the outer side of the lower member of the sash.

In some instances I insure tight joints between the different members of the structure or between members and walls by cutting away the inner sides of the members to form inclined faces v, which will form tapering recesses with the other members and walls, which then I fill with cement W.

It will be evident that features of invention herein described may be used in connection with doors and other finish for buildings or furniture, &c.

5 I do not here claim the detailed features shown and described and constituting the subject of claims in my applications Serial Nos. 156,359 and 96,318.

Without limiting myself to the precise construction set forth, I claim—

10 1. As an article of manufacture, a metallic finishing-strip for buildings, &c., consisting of a hollow metallic strip provided with solid non-friable composition adapted to receive and retain screws, substantially as set forth.

20 2. A strip constituting a substitute for woodwork consisting of metal bent to form closed and open sides, with a solid non-friable composition, the exposed face of which constitutes the other side of the strip and which is adapted to receive and retain screws, substantially as set forth.

25 3. A metallic framework, the members of which are bent metal strips open at one side and filled with a solid pervious non-friable composition, substantially as set forth.

30 4. The combination in a metallic structure of members each consisting of a metallic strip bent to form an open-sided tube and contain-

ing a filler and secured to the structure with the open side against the structure, substantially as set forth.

5. The combination in a metallic structure of members each consisting of a metallic strip bent to form an open-sided tube and containing a filler and secured by screws to the structure with the open side against the structure, substantially as set forth. 35

6. The combination in a metallic structure of members each consisting of a metallic strip bent to form an open-sided tube and containing a filler of a pervious non-friable composition, and secured to the structure with the open side against the structure, substantially as set forth. 40 45

7. The combination in a metallic structure of a member consisting of a filled bent metallic strip open and inclined at one side and a filling of cement between the inclined side and the adjacent part of the structure, substantially as set forth. 50

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

NIELS POULSON.

Witnesses:

NATHAN B. SAGE,
CHARLES S. COOKE.