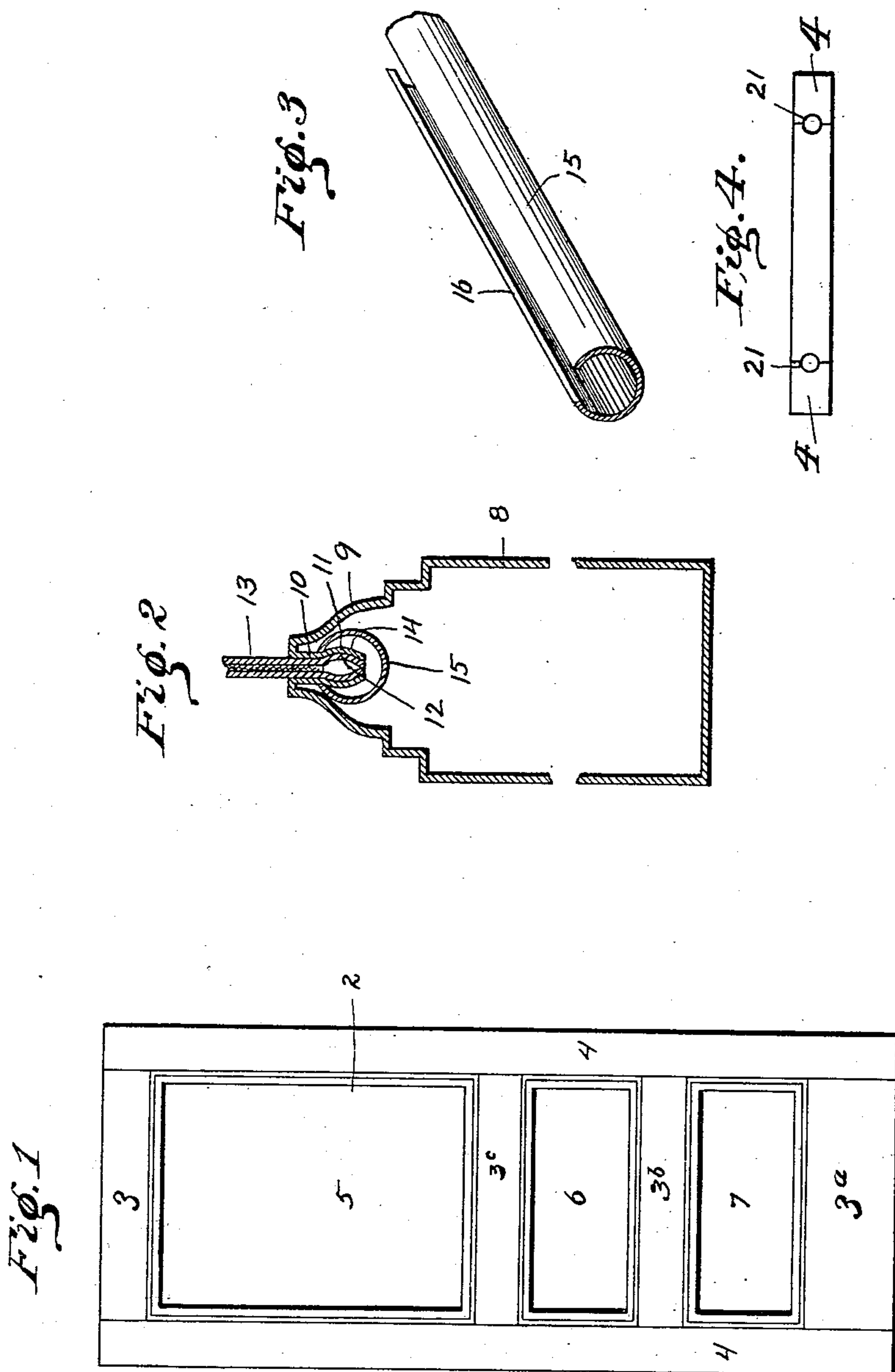


No. 751,097.

PATENTED FEB. 2, 1904.

E. OHNSTRAND.
METALLIC FURNITURE.
APPLICATION FILED FEB. 20, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

ENOCH OHNSTRAND, OF JAMESTOWN, NEW YORK, ASSIGNOR TO ART METAL CONSTRUCTION COMPANY, OF JAMESTOWN, NEW YORK, A CORPORATION OF NEW YORK.

METALLIC FURNITURE.

SPECIFICATION forming part of Letters Patent No. 751,097, dated February 2, 1904.

Application filed February 20, 1903. Serial No. 144,217. (No model.)

To all whom it may concern:

Be it known that I, ENOCH OHNSTRAND, a resident of Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Metallic Furniture, (Case No. 2;) and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to metallic furniture, and within the term "furniture" as here employed are included doors, windows, partitions, and other fixtures, as well as bedsteads, bureaus, and like movable articles.

The present invention relates to one of the structures shown in an application filed by me of even date herewith, Serial No. 144,216, in which I have set forth and claimed, broadly, the general means of securing together the panels and rails and stiles or other parts of a door or other article of furniture; and its object is to provide a simple means for securing the panels within the rails or stiles to form a secure connection.

To these ends my invention comprises, generally stated, a door or other metallic furniture formed of a hollow sheet-metal rail, stile, or like body portion having its free ends turned inwardly, a panel or like part and an interlocking connection between them, such as a recess or groove formed longitudinally of the inwardly-projecting flange, and a rib or like projection on the panel and a connecting or clamping device adapted to engage said inwardly-projecting portions beyond said grooves whereby the panels are clamped securely between said projecting flanges and said grooves act to prevent the withdrawal of said panels.

To enable others skill in the art to make and use my invention, I will describe the same more fully with reference to the accompanying drawings, in which—

Figure 1 is a view of a door embodying my invention, and Fig. 2 is a cross-section of one of the rails or stiles. Fig. 3 is a view of tubular clamping-section. Fig. 4 is a top view of door.

Like numerals indicate like parts in each of the figures.

I have illustrated my invention in connection with a metallic door, though, as above set forth, the invention may be applied to any articles of furniture fixed or movable.

The door 2 is composed of the hollow plate or sheet metal rails 3 3^a 3^b 3^c and stiles 4 with the panels 5, 6, and 7. The stiles and rails are each, with exception of intermediate rails 3^b 3^c, preferably formed of a continuous piece of sheet metal, as indicated in Fig. 2, the metal being suitably shaped or bent to form the hollow body portion 8 of the stile, while at the same time, if desired, the beveled or like-shaped molding 9 may be formed out of the same piece of metal, so that the necessity of attaching said molding is avoided. The free ends of the metal are then bent inwardly to form the lips or flanges 10, said flanges projecting a suitable distance within the hollow body of the rail or stile. The inwardly-projecting flanges 10 have the recesses or grooves 11, formed therein, extending longitudinally thereof, and said grooves are adapted to receive the correspondingly-shaped ribs or beading 12, formed on the panel-pieces 13. In this manner the flanges and panels interlock, so that when united, as hereinafter set forth, they will resist any pulling strain tending to separate or draw apart. The recesses 11 and beading 12 are preferably formed by suitable bending of the sheet metal, so that in forming the recesses 11 bulging portions 14 are formed on the opposite faces of the flanges. After the panel-pieces have been inserted in the manner described between the flanges 10, with the ribs 12 engaging the recesses on said flanges, the means for holding the parts together is then applied, the means here illustrated consisting of a tubular section 15, slit from end to end, thereby forming a slot 16 longitudinally thereof when said edges are separated, the tubular shape and spring of the metal acting to force its edges together. This tubular section is slipped endwise over the inwardly-extending flanges 10 of the rail

or stile, with its edges engaging said flanges for substantially their entire length and beyond the bulging portions 14, the tubular section inclosing the interlocking point between the flanges and panel. As stated above, the spring of the metal of the tubular section will act to clamp or bind the flanges with the interposed panel-pieces, so as to securely hold said panel-pieces therein, while at the same time the bulging portions of the flanges formed by the grooves 11 will act to prevent the slipping of the tubular section, said bulging portions forming shoulders or enlargements with which the edges of said tubular section engage. The ribs or beading 12 on the panels by their engagement with the grooves 11 act to prevent the withdrawal of said panels when clamped between the flanges 10 by means of said tubular section. In this manner I obtain a simple and effective means of preventing the displacement of the panels as well as the tubular section, so that practically all liability of the disconnection of parts is avoided. In assembling the parts the rails 3^b 3^c, which, owing to the fact that the panels enter from both sides thereof, cannot be made in one piece, have the panels inserted between them, and the tubular sections 15 are then driven in the open ends of the rails, so as to secure the rails and panels securely together. In the same manner the top and bottom rails 3^a are secured to the panels 5 and 7, the tubular section 15 being driven in from the side through the open ends of the rails in the same manner as in the case of the intermediate rails. The stiles 4 are now brought into position, and in order to connect them with the panels by means of like tubular sections 15 apertures 21 may be formed in the top of the door, as indicated in Fig. 4, so that when the stiles are brought into proper position with the side edges of the panels entering between the inwardly-extending flanges of the stiles the tubular section 15 may be driven down through the aperture 21 for practically the entire length of the stile, so as to engage the inwardly-projecting flanges of the stiles and bind the side edges of the panels and stiles together. These apertures 21 may afterward be filled up with a suitable piece of metal. The tubular section will act to securely unite the panel-pieces and the flanges of the rail or stile and bind them together, so as to form a secure connection without the use of rivets or other fastening devices. The means for connecting the parts is concealed within the hollow sheet-metal stile, and there is nothing to indicate the presence of any fastening device

or anything which would tend to destroy the appearance of the finished door. Between the two panel-pieces is interposed a lining of suitable sound-deadening material, such as asbestos, so that noises will not readily carry from one apartment to another where doors of this construction are employed.

What I claim is—

1. In metallic furniture, the combination of a hollow sheet-metal stile, rail or other body portion having inwardly-projecting flanges or lips, a panel or like part fitting between said flanges, an interlocking connection between the flanges and panel, and means within the stile for holding the parts in interlocked position.

2. In metallic furniture, the combination of a hollow sheet-metal stile, rail or other body portion having inwardly-projecting flanges or lips, a panel or like part fitting between said flanges, and clamping means within the stile for holding the parts in interlocked position.

3. In metallic furniture, a stile, rail or other body portion having inwardly-projecting grooved flanges, a panel or like part inserted between said flanges and having a rib adapted to engage said grooves, and means for securing the panel between said flanges.

4. In metallic furniture, the combination of a hollow sheet-metal stile, rail or other body portion having inwardly-projecting grooved flanges, a panel or like part inserted between said flanges and having a rib adapted to engage said grooves, and a clamping device within the stile for securing the panel between said flanges.

5. In metallic furniture, a stile having inwardly-projecting flanges having recesses or grooves bent therein formed by bulged outer pieces, a panel or like part inserted between said flanges and having a rib adapted to engage said grooves, and a clamping device engaging said flanges beyond said bulged portions.

6. In metallic furniture, a stile, rail or other body portion having inwardly-projecting grooved flanges, a panel or like part inserted between said flanges and having ribs adapted to engage said grooves, and a slitted tubular section engaging said flanges beyond said grooves.

In testimony whereof I, the said ENOCH OHNSTRAND, have hereunto set my hand.

ENOCH OHNSTRAND.

Witnesses:

A. GILBERT,
R. M. BAUER.