No. 749,116. PATENTED JAN. 5, 1904.

H. J. VALENTINE.

TOP PLATE FOR REGISTERS.

APPLICATION FILED JULY 12, 1902.

NO MODEL.

Fig. 1

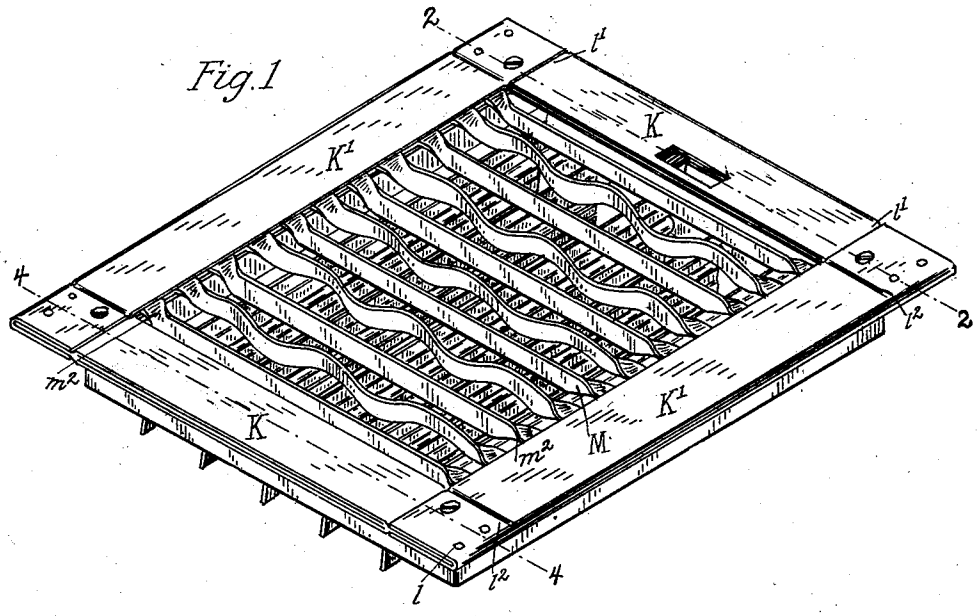


Fig. 2

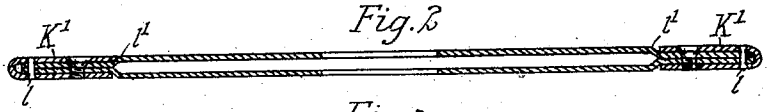


Fig. 3

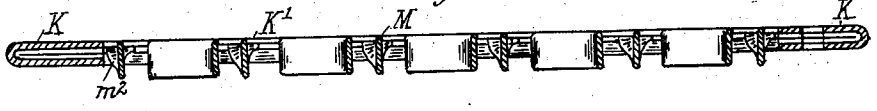


Fig. 4

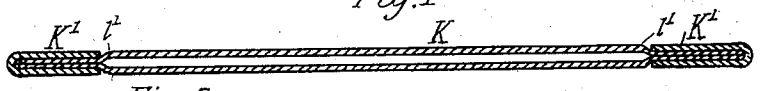


Fig. 5

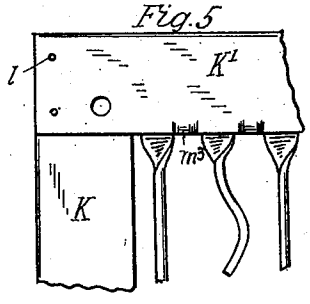


Fig. 6

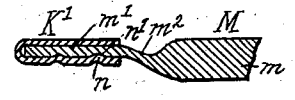


Fig. 7

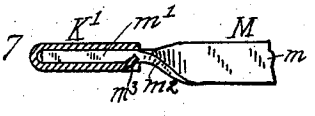
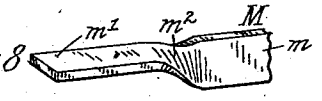


Fig. 8



Witnesses:

Edward J. Murphy

Richard I. Harvey

Inventor:

Harry J. Valentine

by Geo. Lothrop & Co.

Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 749,116. Patented January 5, 1904.

UNITED STATES PATENT OFFICE.

HARRY J. VALENTINE, OF HEMPSTEAD, NEW YORK, ASSIGNOR TO THE COLUMBIAN HARDWARE COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

TOP PLATE FOR REGISTERS.

SPECIFICATION forming part of Letters Patent No. 749,116, dated January 5, 1904.

Original application filed May 20, 1902, Serial No. 108,148. Divided and this application filed July 12, 1902. Serial No. 115,371. (No model.)

To all whom it may concern:

Be it known that I, HARRY J. VALENTINE, a citizen of the United States of America, and a resident of Hempstead, Nassau county, New York, have invented certain new and useful Improvements in Top Plates for Registers, of which the following is a specification.

This invention relates to top plates for registers for hot-air furnaces or for those used for ventilating purposes; and the object of the same is to provide a top plate or cover for the purpose stated which will be strong and substantial, which may be composed of sheet metal, and by which it is possible to impart a certain degree of ornamentation and lightness.

To these ends my invention consists of certain features of construction to be hereinafter described and then particularly claimed.

In the accompanying drawings, Figure 1 is a perspective view of a register viewed from a point to show the top plate to advantage. Fig. 2 is a transverse section of the top plate on line 2 2, Fig. 1. Fig. 3 is a longitudinal section thereof. Fig. 4 is a transverse section on line 4 4, Fig. 1. Fig. 5 is an under side view of a portion of one end only of the top plate, the other end being constructed the same. Figs. 6 and 7 are detail views showing how the bars of the grillework are secured in position. Fig. 8 is a detail side elevation of one of the bars of the grillework, showing how the same is twisted to produce a flush upper surface throughout.

According to the present invention the top-plate is preferably made of sheet metal bent into suitable shape and composed of four side pieces K K K′ K′, Figs. 1 to 8. Each of the side pieces is composed of a strip of sheet metal folded longitudinally along the median line, there being a certain fullness between the ends of the same—that is to say, the parallel sides are not mashed down close together, but are spaced a suitable distance apart to provide thickness and strength. The ends of the side pieces K K are pressed together and inserted between the open ends of the side pieces K′ K′. At the joints so formed the parts are connected by means of suitable rivets *l*. This part of the structure is clearly shown in Fig. 2. Shoulders l' l^2 are formed transversely of the side pieces K K′, respectively, so as to abut against the adjacent edges of the same and to thereby impart additional strength and firmness to the rectangular frame of the top plate. Between the side pieces K′ K′ are located and secured bars M, which form the grillework or ornamental work of the register. Details of these bars and the means for connecting them with the top plate are shown in Figs. 6, 7, and 8. The bars are each composed of a body *m*, and the ends m' thereof are disposed at right angles to the plane of each bar, the upper or outer surfaces of ends m' being flush or substantially flush with the outer or upper edge of the body of the bar, this being preferably effectuated by twisting the bar at both ends at m^2, so that the ends m' are located to one side of and parallel with the longitudinal axis of the body *m*. In this way the grille or ornamental work, which is composed of these bars, has an ornamental effect imparted thereto by the twist formed in the bars, and at the same time the bars are strengthened against flexure in any direction. The bars are of greater length than the distance between the inner edges of the side pieces K′ K′, and the ends m' of the bars are inserted in the longitudinal recesses formed by doubling the end pieces. The bars are firmly retained therein and spaced at suitable intervals apart by crimping or stamping the inner sides of the side pieces between the ends of the bars to form depressions on the outside of the inner side portions of the side pieces which at the inner side form shoulders m^3, that stay the bars against lateral motion. As a further security against shifting of the bars the inner portions of the side pieces K′ K′ are formed with stamped teats *n*, which enter small depressions n' in the ends of the bars.

What I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described top plate for reg-

isters, the same comprising a frame composed of suitably-joined pieces of doubled sheet metal, the end of one piece at each joint being left open to receive the end of the other piece, the sides of which are pressed together, and bars extending across the frame, and the ends of which are retained in the same, substantially as described.

2. The herein-described top plate for registers, the same comprising a rectangular frame composed of sheet-metal strips doubled lengthwise on themselves and formed with overlapping riveted joints at the corners, the end of one piece at each joint being left open to receive the end of the other piece, the sides of which are pressed together, and grille or ornamental work secured within the said frame between opposite sides of the doubled sheet-metal strips, substantially as described.

3. The herein-described top plate for registers, the same comprising a rectangular frame composed of sheet-metal strips doubled lengthwise, bars extending across the frame, and inserted between the two side portions of the sheet-metal strips, and shoulders struck up from the sheet-metal strips and located between the ends of the bars to form stays against lateral displacement of the bars, substantially as described.

Signed at New York, N. Y., this 11th day of July, 1902.

HARRY J. VALENTINE.

Witnesses:
EDWARD J. MURPHY,
GEO. L. WHEELOCK.