

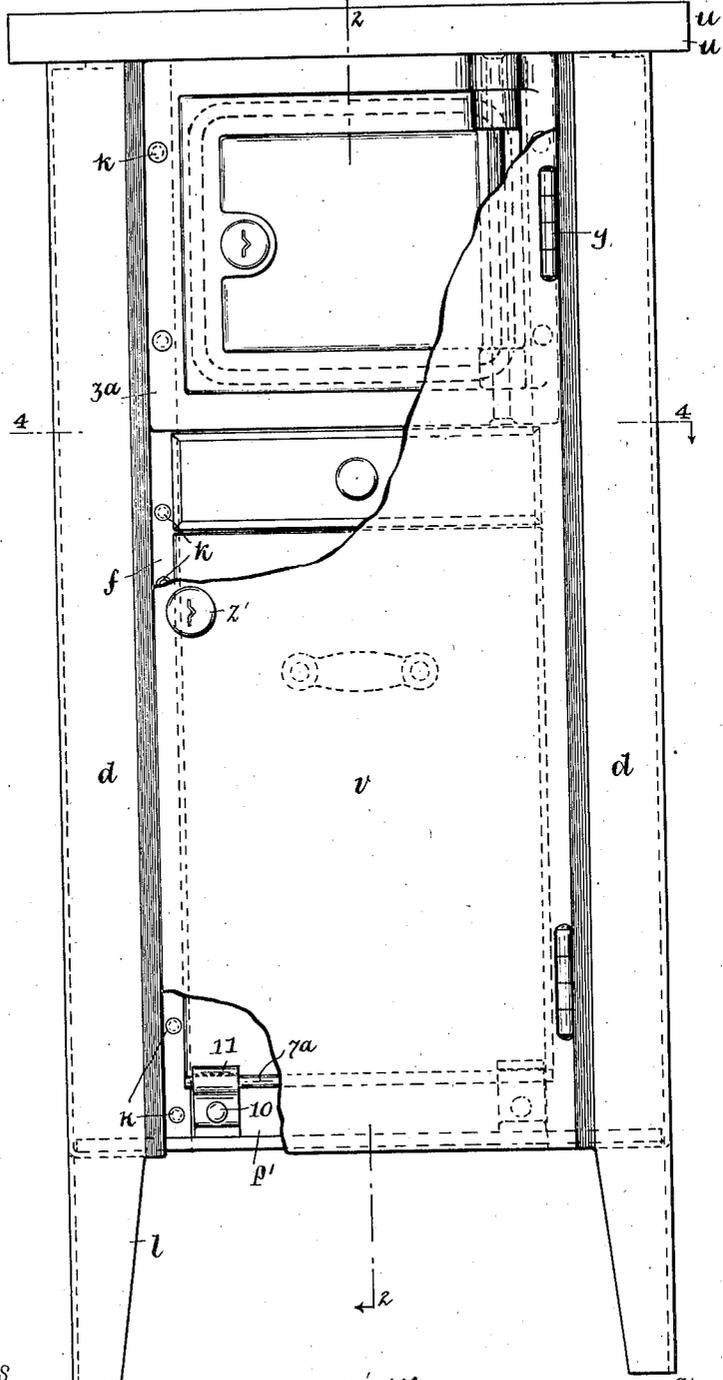
Sept. 1, 1925.

1,551,902

C. A. NELSON
SHEET METAL CABINET

Filed Dec. 6, 1923

4 Sheets-Sheet 1



WITNESS

Wm. Bell

Fig. 1.

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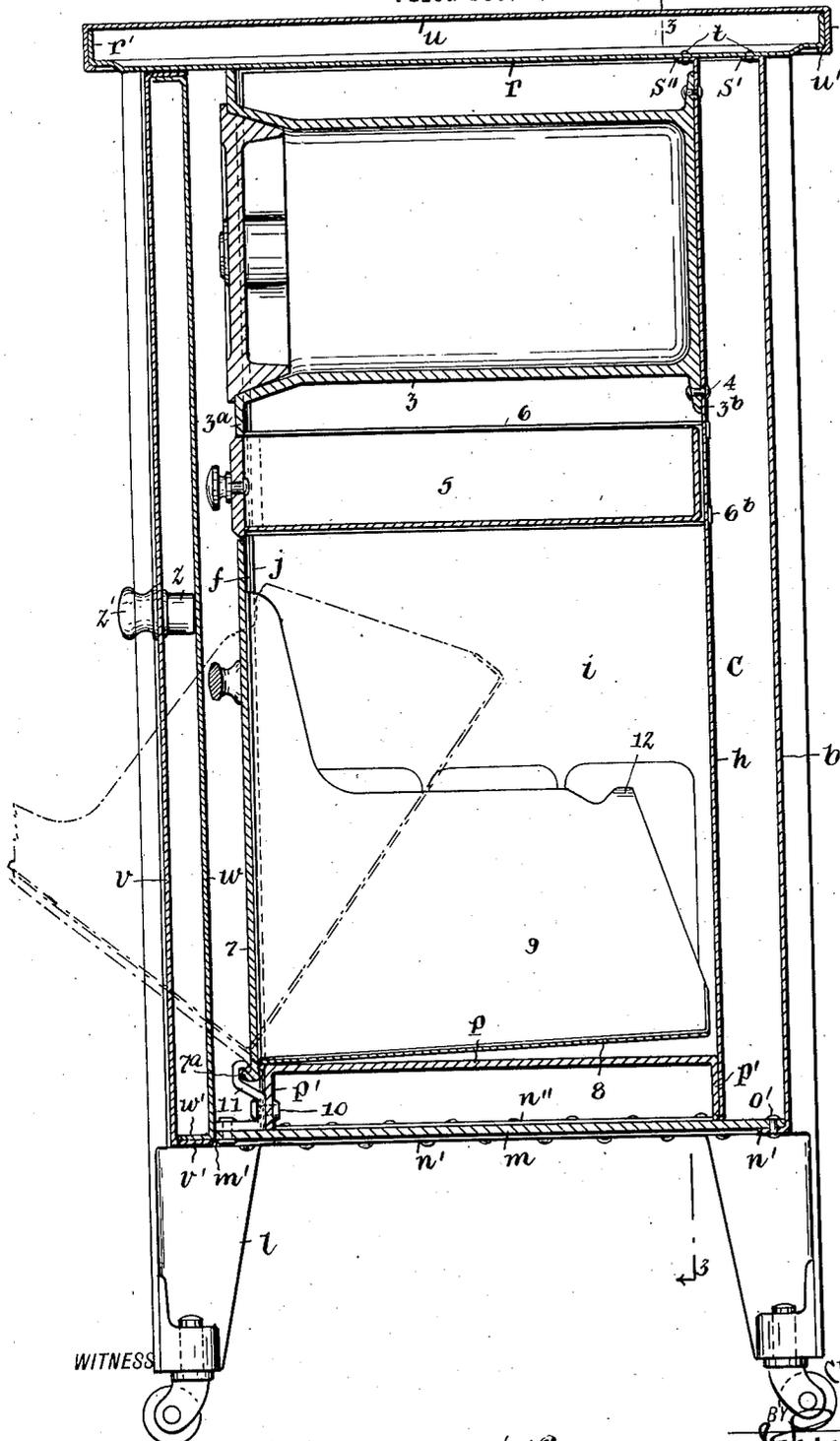
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C. A. NELSON
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WITNESS

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Sept. 1, 1925.

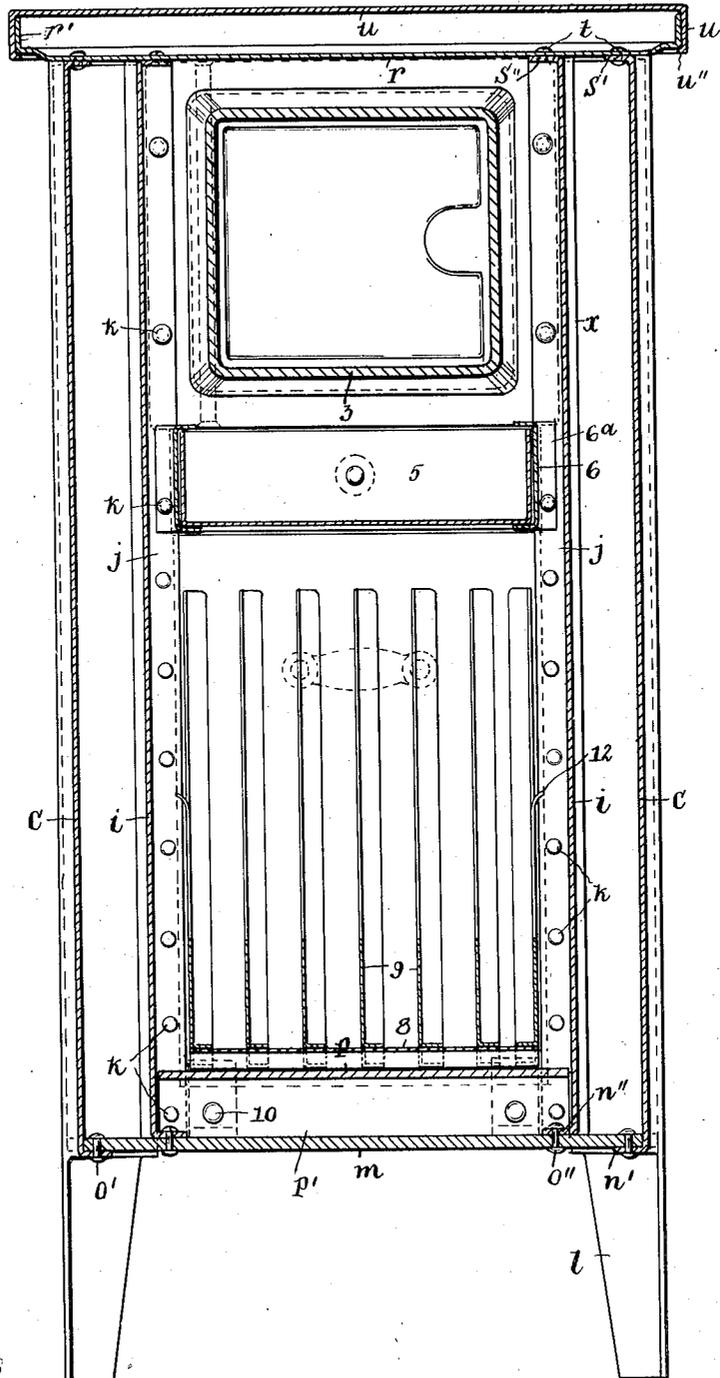
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SHEET METAL CABINET

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4 Sheets-Sheet 3



WITNESS

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Fig. 3.

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Sept 1, 1925.

1,551,902

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SHEET METAL CABINET

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4 Sheets-Sheet 4

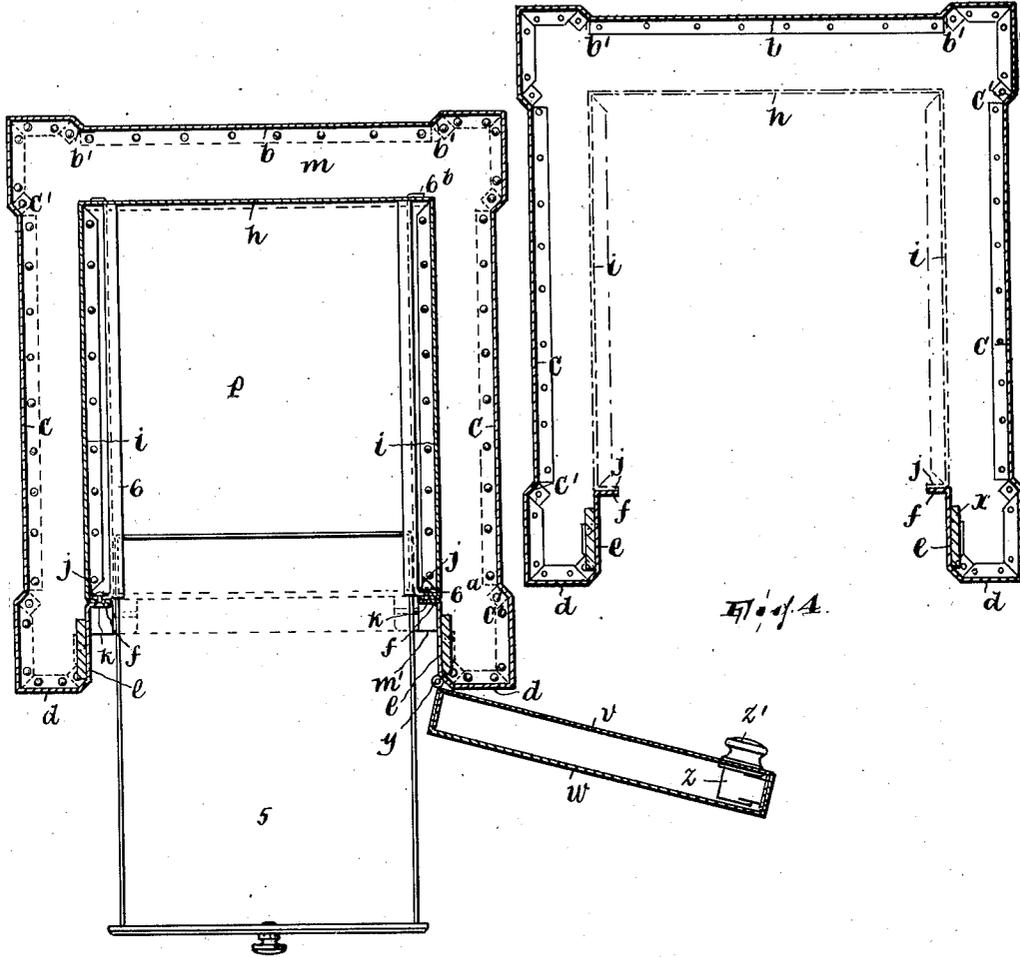


Fig. 1.

Fig. 4.

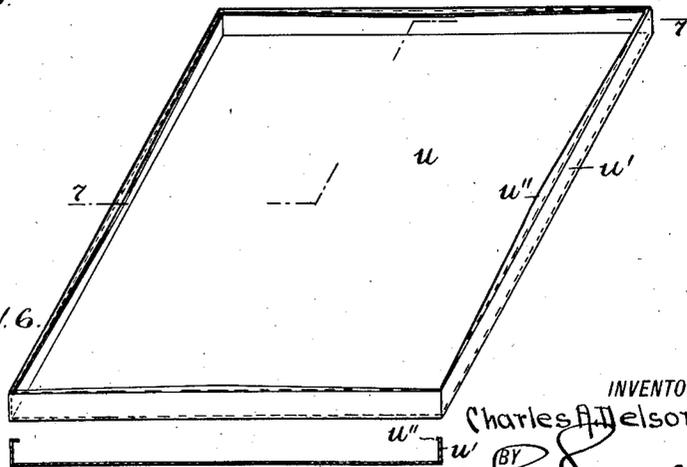


Fig. 2.

WITNESS

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Fig. 3.

Patented Sept. 1, 1925.

1,551,902

UNITED STATES PATENT OFFICE.

CHARLES A. NELSON, OF WATERTOWN, NEW YORK, ASSIGNOR OF FORTY-NINE ONE-HUNDREDTHS TO FREDERICK D. G. HARTMANN, OF UTICA, NEW YORK.

SHEET-METAL CABINET.

Application filed December 6, 1923. Serial No. 678,876.

To all whom it may concern:

Be it known that I, CHARLES A. NELSON, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Sheet-Metal Cabinets, of which the following is a specification.

This invention relates to cabinets designed especially for the safe-keeping of articles of value or of a private nature, and it has for its object to provide a cabinet of this class for domestic and office use which shall be constructed mainly of sheet metal, as steel, and yet be inexpensive to manufacture and attractive in appearance and comparatively light in weight, while having great strength so as both to resist attempts to obtain access to its contents by force and the wear and tear incident to moving it about, and also the ability to resist any fire of at least a merely local character.

In the drawings,

Fig. 1 is a front elevation, with the door of the cabinet partly broken away;

Fig. 2 is a section on line 2—2, Fig. 1;

Fig. 3 is a section on line 3—3, Fig. 2, looking toward the left;

Figs. 4 and 5 are sections on the line 4—4, Fig. 1, Fig. 4 showing only the outer wall of what I term the body part of the cabinet and Fig. 5 showing all the parts revealed by the section, the door being open and a certain drawer partly withdrawn;

Fig. 6 shows in underneath perspective the cover or top; and

Fig. 7 is a section on line 7—7, Fig. 6.

The body part of the cabinet is formed hollow and outwardly seamless by two spaced wall structures, inner and outer, each preferably consisting of a single piece of sheet metal, as steel.

The outer wall structure (Fig. 4) is formed from an elongated blank, which would be substantially rectangular in plan, by bending off in the same direction the end portions of the blank so that said end portions stand parallel with each other, thus producing the back wall *b* and the two side walls *c c*, then rebending inwardly the material forming continuations of the walls *c c* on parallel lines, so that there result narrow front walls *d d* and rearwardly projecting interior narrow walls *e e*, and finally bending the extreme edges of the material to-

ward each other and so as to lie in the same plane, producing flanges *f f*, all the lines of bending being perpendicular to the long sides of the original blank. A panelled appearance may if desired be imparted to the back *b* and two side walls *c* of the structure by bending the blank, as at *b' c'*, also on lines perpendicular to its long sides in a manner to leave more or less of the middle portion of each such wall set in relatively to the lateral margins thereof.

The inner wall structure is also formed from an elongated blank, substantially rectangular in plan, by bending off in the same direction the end portions of the blank so that said end portions stand parallel with each other, thus producing the back wall *h* and the two side walls *i i*, and then bending the extreme edges of the end portions preferably toward each other and so as to lie in the same plane, producing flanges *j j*, all the lines of being perpendicular to the long sides of the blank.

The inner wall structure is assembled with the outer wall structure by placing it therein, as shown best by dotted lines in Fig. 4, so that the flanges *j* of the former abut face to face and rearwardly against the flanges *f*, whereupon these flanges are secured together from top to bottom in some substantial and permanent manner, as by rivets, to form a composite flange or joint *f-j*. The hollow-walled structure thus produced, generally U-shaped in plan, has great strength for its weight; it is outwardly seamless; the operations to form it are simple so that on that account and in view of the material used the cost of producing it is low; and as will appear it is adapted to contribute to the fire-proofing of the cabinet as a whole.

The blank from which the outer wall structure is formed, though generally rectangular as stated, may have extensions projecting from what is to be its lower edge in the finished outer wall structure, arranged preferably so that the lines of bending to produce the walls *b, c* and *d* will bisect them; these extensions will then form legs *l*, reinforced by being angular in cross-section.

A bottom for the cabinet is formed as follows: A horizontal plate or wall *m*, preferably of heavier material than that used for the aforesaid wall structures and having in plan the same general contour as the in-

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terior of the spaced form by walls *b*, *c*, *d*, *e*, of the outer wall structure (being cut away at the front between the two front columns, as at *m'*, Fig. 5—see also Fig. 2), is secured in some permanent manner to the lower edge portions of said walls *b c d e*, as by said walls having angular projections, here shown as flanges *n'*, on which the plate *m* marginally rests and to which it is secured, as by rivets *o'*; at least the side walls *i* of the inner wall structure *h i* may have angular projections, as flanges *n''*, (Fig. 3) secured, as by rivets *o''*, to this plate, thus at the bottom to hold the inner wall structure rigidly in parallel relation to the outer wall structure. A false bottom, consisting of a horizontal rectangular plate *p*, having the same form and dimensions as the interior of the inner wall structure and having depending flanges *p'*, is shown supported by its said flanges on the bottom *m*, the front flange inwardly abutting and being secured to the joints or flanges *f—j*, as by the lowest rivets *k*.

The top of the cabinet is formed as follows: A rectangular plate *r* of somewhat greater area than the outer wall structure is arranged upon and permanently secured thereto, and preferably also to the inner wall structure, as by the walls of these structures having angular projections, as flanges *s' s''*, to which said plate *r* is secured, as by rivets *t*. This plate *r* has preferably a marginal upstanding flange *r'* all around. On account of its superior area it affords an exterior top flange or crown on the cabinet. A cap *u* surmounts the cabinet and is permanently secured to flanged plate *r* as follows. This cap *u* has a depending continuous flange *u'* which at each of its four sides and at the lower edge thereof is provided with an intumed lip *u''* which in plan (see Fig. 6) is graduated in width from the middle of the lip, where it is widest, toward each end thereof, where it disappears, so that at each corner of the (angular) flange *u'* the lip-formation does not exist. This cap *u* is applied to the flanged plate *r* of the cabinet by placing it thereon, open side downward, then engaging the lips *u''* thereof corresponding to two adjoining sides of its flange under said top flange, and finally, having sprung or bowed outwardly the other two adjoining sides of its flange so that their lips will clear the top flange, forcing the plate downward until the latter lips lock under said top flange. Once the plate *u* has thus been applied it becomes a permanent part of the cabinet and cannot be removed, due to its inherent stiffness, without the application of special means.

A closure for the front opening of the cabinet is formed by two rectangular plates *v w* having their margins *v' w'* bent off all around, one of these thus shallow rectangular members being fitted into the other with

the open side of each facing the other. Two heavy strips *x* (Figs. 4 and 5) may be welded or otherwise secured to the inner surfaces of the walls *e* to stiffen them in the plane of the door when in closed position and also afford a more solid support for the door or closure where it is hinged, at *y*, and for the engagement of the bolt of the locking means *z*, which is here shown as including a knob *z'* apertured to receive a key.

It is not material how the interior of the cabinet is availed of. I however show it as containing a strongbox, a drawer or till and a file for papers, account books, etc. This strong-box, the guides or ways in which the drawer moves and the false bottom *p* serve as means to brace the structure from front to rear by connecting the joints *f—j* with the back wall *h*. The strong-box 3 has the lateral portions of its front marginal flange 3^a secured by the rivets *k* to the joint or flange *f—j*, while its rear marginal flange 3^b is secured by rivets 4 to the back wall *h* of the inner wall structure. The drawer 5 is arranged to slide in grooved guides 6, each formed of a piece of channeled sheet metal, which have frontal flanges 6^a secured by the rivets *k* to the joints or flanges *f—j* and tangs 6^b passed through holes in said wall *h* and bent over. The file comprises a front wall 7 of sheet metal, a bottom wall 8 secured thereto and projecting rearwardly therefrom and upright sheet-metal partitions 9 forming between them the filing spaces and suitably secured to the walls 7 8. The lower edge of the wall 7 is bent forward to form a hinging flange 7^a, the said wall being adapted to bear against the joints or flanges *f—j*, depending below the top surface of the false bottom *p*, and secured by rivets 10 to the front depending flange *p'* of said false bottom are a hook or hooks 11 which engage the flange 7^a and form therewith a hinge whose members may only be separated when the file is tilted forward sufficiently to permit the flange to clear the hooks. The outermost partitions 9 are spaced apart a distance approximately equal to the space between the joints or flanges *f—j*, and they have at their rear portions laterally bent lugs or stops 12 which normally engage said joints or flanges as abutments when the file is tilted forward and support it in that position; by pressing said partitions (which are sufficiently flexible for the purpose) toward each other the lugs will clear the joints or flanges, permitting the file to be removed bodily from the cabinet.

It will be understood that the available spaces existing in the exterior wall structure of the improved cabinet, as between its inner and outer walls *h, i, i* and *b, c, c*, between its bottom-forming walls *m* and *p*, between its top-forming walls *r u* and between

the members *v w* of its door, may be filled with any fire-insulating material, as air or some solid substance; an advantage of the described construction of the body part of the cabinet is that if it is desired that the insulating material be in the form of solid material it may be molded into slabs and the slabs introduced into the spaces between the inner and outer wall structures after the latter are assembled.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A cabinet including, in combination, two one-piece upright sheet-metal wall structures one of which is contained in the other and each of which includes a back wall and two side walls, the back wall and side walls of one structure being spaced from the back wall and side walls, respectively, of the other structure and the outer structure having portions forming forward integral continuations of its side walls rebent inwardly and secured to the forward portions of the side walls of the inner structure, whereby an outwardly seamless body part is formed having a front opening, a bottom and a top for the cabinet each secured to one of said structures, and a closure for said front opening.

2. A cabinet including, in combination, two one-piece upright sheet-metal wall structures one of which is contained in the other and each of which includes a back wall and two side walls, the back wall and side walls of one structure being spaced from the back wall and side wall, respectively, of the other structure and the inner structure having the forward edges of its side walls bent off and the outer structure having portions forming forward continuations of its side walls rebent inwardly and the extreme edges of said continuations bent off and secured to and thereby forming a joint with said bent-off edges of the side walls of the inner structure, whereby an outwardly seamless body part is formed having a front opening, a bottom and a top for the cabinet each secured to one of said structures, and a closure for said front opening.

3. A cabinet including, in combination, two one-piece upright sheet-metal wall structures one of which is contained in the other and each of which includes a back wall and two side walls, the back wall and side walls of one structure being spaced from the back wall and side walls, respectively, of the other structure and the inner structure having the forward edges of its side walls bent off and the outer structure having portions forming forward con-

tinuations of its side walls rebent inwardly and the extreme edges of said continuations bent off and secured to and thereby forming a joint with said bent-off edges of the side walls of the inner structure, whereby an outwardly seamless body part is formed having a front opening, bracing means connecting the back wall of the inner structure with each of said joints, a bottom and a top for the cabinet each secured to one of said structures, and a closure for said front opening.

4. A cabinet including, in combination, two upright sheet-metal wall structures one of which is contained in the other and each of which includes a back and two side walls, the back walls being spaced from each other and the two corresponding side walls of said structures being spaced from each other forward from said back walls but joined together at their forward portions, whereby a hollow structure generally U-shaped in plan is formed having an opening between the forward portions of the side walls of the inner structure, said walls having projections extending from their upper and lower edges in angular relation thereto, a bottom and a top respectively secured to the lower and the upper projections, and a closure for the opening.

5. A cabinet including, in combination, a body part having a polygonal top flange projecting laterally all around, and a sheet metal cap including a polygonal horizontal wall substantially conforming in plan to the plan of said flange, flanges depending from the several sides of said wall, and inward lips extending along the flanges and each having its greatest width between its ends and being gradually reduced in width toward both ends thereof, said cap being sprung over said flange of the body part and having its lips engaged under said top flange.

6. In combination, with a cabinet body part, a top therefor comprising a sheet metal horizontal wall formed polygonal in plan and adapted to be secured on the body part and having marginal upstanding flanges, and a sheet metal cap including a polygonal horizontal wall substantially conforming in plan to the plan of the first wall, flanges depending from the several sides of the cap wall, and inward lips extending along the latter flanges and each having its greatest width between its ends and being gradually reduced in width toward both ends thereof, said cap being sprung over said first wall and having its lips engaged marginally thereunder.

In testimony whereof I affix my signature.

CHARLES A. NELSON.