

Sept. 1, 1959

O. N. AUER
SECTIONAL CABINET

2,902,328

Filed July 20, 1953

3 Sheets-Sheet 1

Fig. 1.

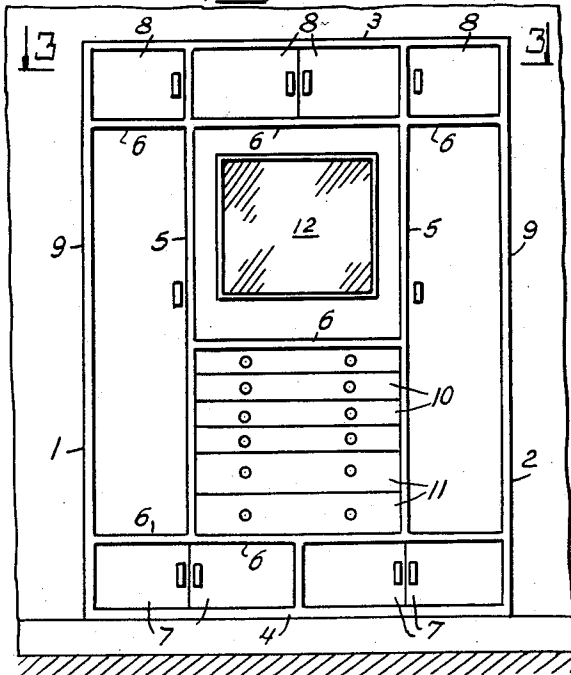


Fig. 2.

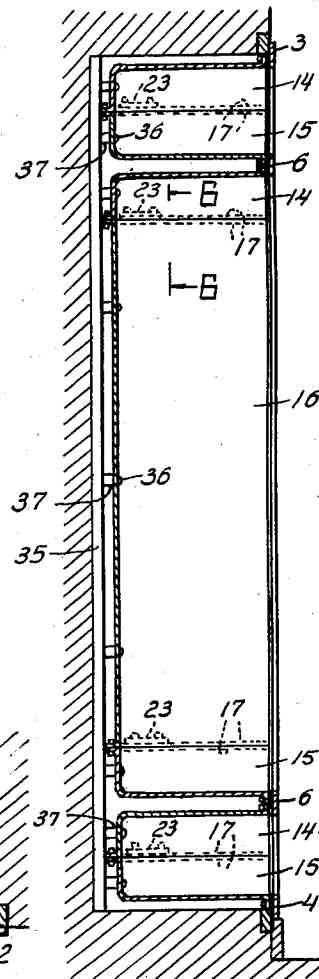


Fig. 3.

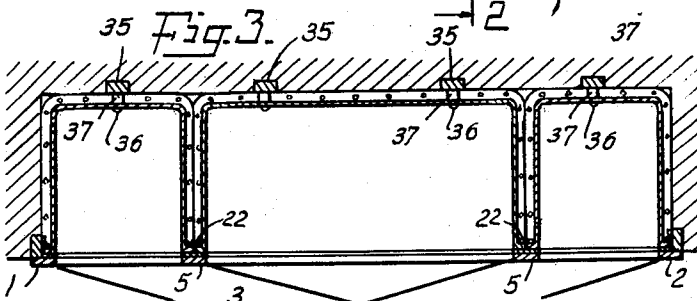


Fig. 4.

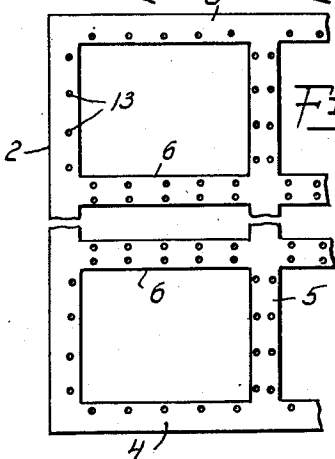


Fig. 5.

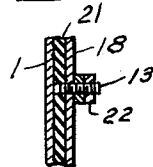
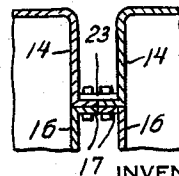


Fig. 6.



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Fig. 9.

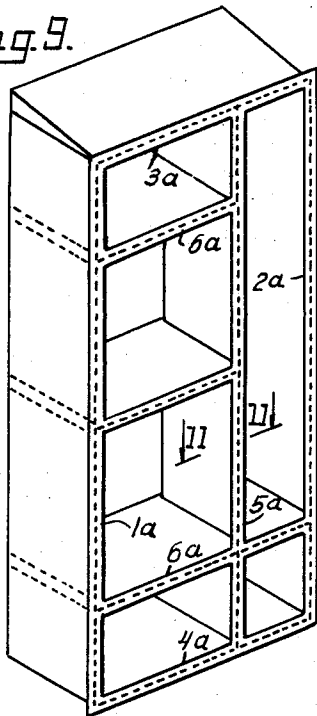


Fig. 7.

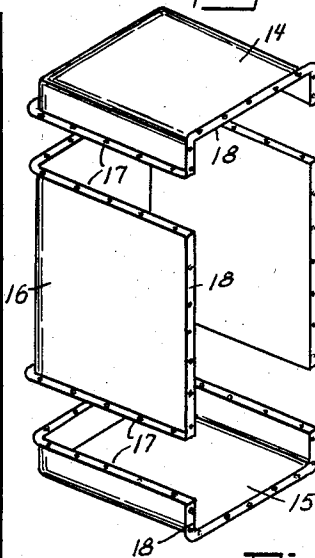


Fig. 8.

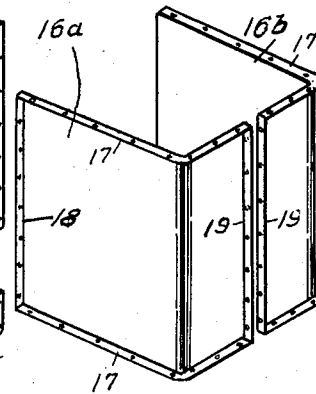


Fig. 12.

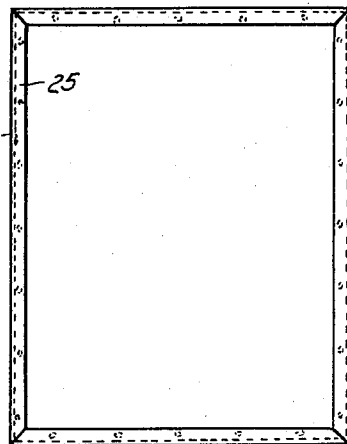


Fig. 10.

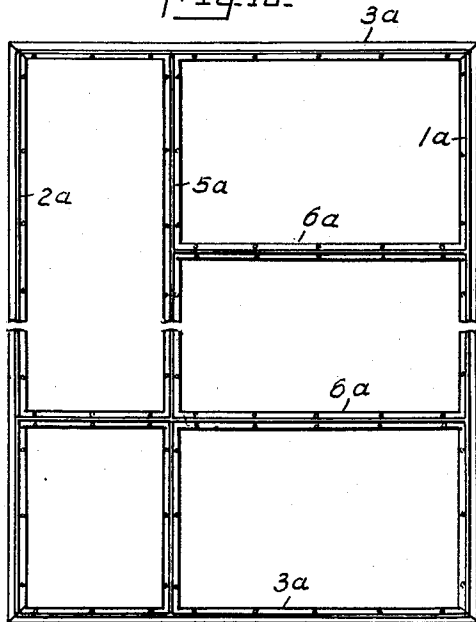
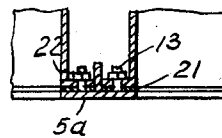


Fig. 11.



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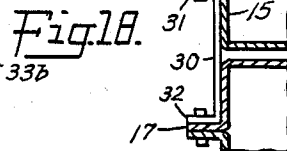
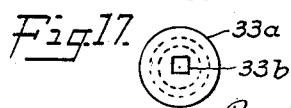
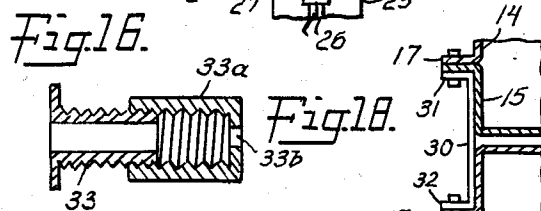
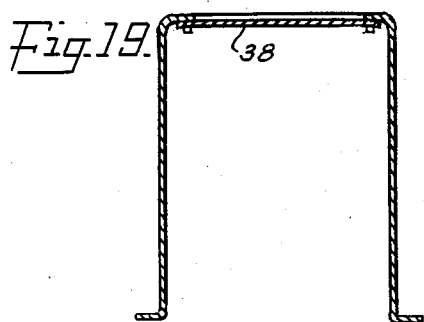
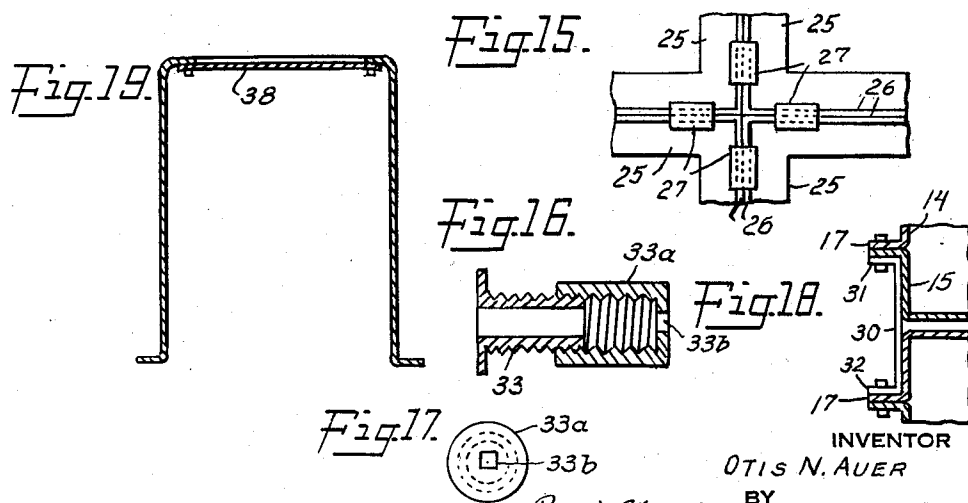
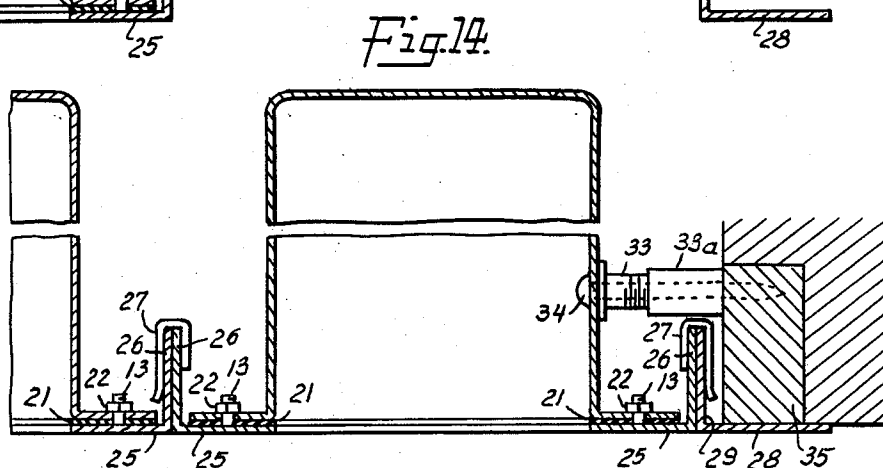
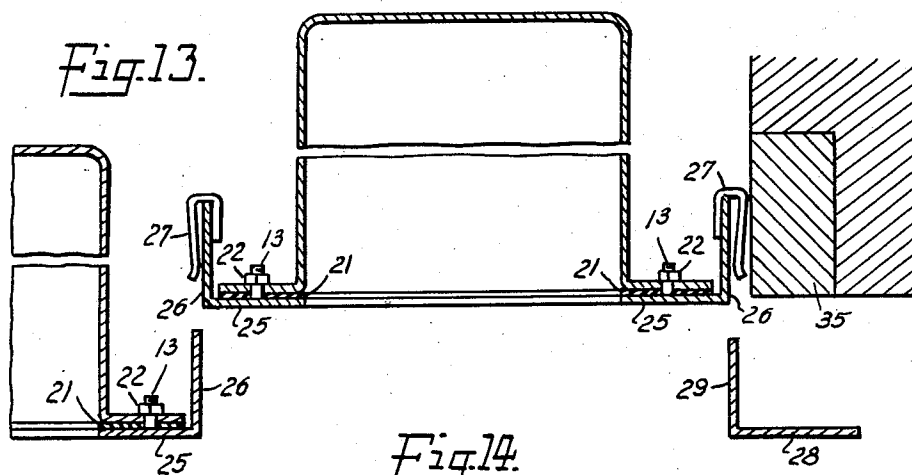
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SECTIONAL CABINET

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3 Claims. (Cl. 312—108)

This invention relates to sectional metal cabinets particularly intended for use in hospitals and other buildings.

The new metal cabinets are multiple section cabinets made up of a number of sections which are open at their front ends and with outwardly turned flanges at their front ends secured to a front metal frame having transverse and vertical frame members to which the outwardly turned flanges are secured.

The individual sections of the cabinet are of unit, or multiple unit size and a number of such units are secured to the front frame to form a multi-sectional cabinet.

The new multiple cabinets are particularly advantageous for use in wall recesses of a hospital or other room where the sections extend backwardly into the recess and the front frame is in alignment with the wall surrounding the recess.

In hospital planning it is important to provide cabinets or storage space for the patients' clothing, including both the street clothing worn by the patient on his arrival at the hospital and the clothing needed during the hospital stay. In addition, the patient's luggage, toilet articles and sundry small items as well as bed linen, blankets and articles for the care of the patient need storage space in the patient's room and elsewhere.

The improved sectional cabinets of the present invention enable such desirable storage space to be furnished at a moderate cost of equipment and at a saving in cost of building construction.

Moreover, the new sectional cabinet with its sections of unit or multiple unit size are adaptable to various types of hospital construction and operation, to provide required storage space, e.g., for a single-patient room or a two-patient room in a hospital, or in other rooms of a hospital such as utility rooms, serving pantries, central supply rooms, laboratories, etc. or in living rooms, etc.

The new sectional cabinets have the advantage that they can be shipped as sections or in knocked-down form, and in standard sizes for assembly on the premises of the purchaser.

The new cabinets are of special value for use in new hospital or other building construction having wall recesses provided for receiving the cabinets, and in such cases a temporary or permanent wood or metal frame is advantageously set in the masonry walls at the time of the construction of the walls, so that the recess is of the proper size to accept the cabinet when assembled and installed, and so that the cabinet can be secured to such frame members. In general, a wooden or metal frame for each recess is supplied by the manufacturer of the cabinet or by the building contractor and built in when the walls are erected to insure proper fit and satisfactory anchorage for the cabinet when installed. And backing strips for each recess are also desirably built into each recess.

In general, the cabinet sections for each multi-unit cabinet will have a uniform depth from the flanged front

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end to the back of the cabinet, although the depth of the sections of different cabinets can be varied, and the sections will have the same unit width or multiple unit width, and the same height or multiple unit height, with the overall width and height of the sections corresponding to the overall width and height of the front frame to which the flanged front ends of the sections are secured.

The front frame to which the sections are rigidly secured may be a single frame member or a frame made up of sections secured together. The frame will have openings corresponding to the open front ends of the sections, and parallel vertical and horizontal frame members to which the outwardly-turned flanges of the front ends of the sections are secured. The front frame may be a single unitary frame fabricated at the factory and shipped to the hospital for assembly with the sections. The frame may also be made up of sections which are assembled and secured together at the time the cabinet is assembled and installed. The outer portions of the frame and also the transverse and vertical intermediate sections may be made of flat metal or of angle iron or of T-cross section. Thus the entire front frame can be made of a single frame and shipped to the hospital together with the sections. Where the frame is made up of angle iron, the frame sections may be separately made and secured to the cabinet sections at the factory and the frame sections secured together when a cabinet is assembled and installed at the hospital.

The individual sections of the cabinet are made of sheet steel with rounded inside corners and of dust- and vermin-proof construction, by drawing, stamping or bending sheets of steel and securing them together. Each section may itself be made of top and bottom sections of drawn or stamped or bent sheet steel horizontally flanged and secured together, or of top, side and bottom sections horizontally flanged and secured together, or the entire unit can be made of sheet steel and welded together. In any case, the section will be provided with an out-turned flange at the front open end of the section for securing to the front frame.

The securing of the flanges of the individual sections to the front frame can be accomplished in different ways. One advantageous method is to weld threaded stud bolts on the back of the frame in spaced relation corresponding to holes drilled in the flanges so that when the sections are secured to the frame, the studs will extend through the openings of the flanges and can be locked thereto by nuts operating on the studs.

Where the sections are made up of individual flanged units bolted together through their flanges, and where the front flanges of the section are secured to the frame a vermin-proof seal is advantageously provided between the flanges, and between the flanges and frame in the form of gaskets of neoprene rubber, asbestos or other material which is compressible to form a tight joint and which will not deteriorate over a period of years.

An advantageous arrangement of the cabinet sections for a two-patient bedroom is one in which there are two side sections of unit width and an intermediate section of multiple-unit width, with one unit of each side section having a considerable height for the storage of clothing on hangers, and with the wider central section having drawers and units containing doors, or a lavatory together with doors. Top and bottom units of the cabinet are also advantageously provided for containing luggage, linen, blankets, etc. In the single-patient bedroom, the cabinet is advantageously made with sections of unit width on one side and multiple-unit width sections on the other.

In some cases the cabinet is installed in a recess between two rooms, or two cabinets may be installed, one in each of two adjoining rooms with space for plumbing between the cabinets. In such cases one of the vertical

sections at the center or side of the cabinet can advantageously be provided with a removable access door at its rear for permitting access to the plumbing. Such an arrangement eliminates the need of separate access doors through the walls of the building, or of breaking through the wall where there are no such doors in the wall.

The individual sections will be spaced apart from each other, both horizontally and vertically, by a distance equal to or somewhat in excess of the widths of the flanges by which the fronts of the section are secured to the frame. The securing of the flanged front ends of the sections to the front frame will hold the sections in spaced relation at their front ends. Spacing members or securing members are also provided for holding the sections in spaced relation at or near their rear ends. This is accomplished by providing spacing members between the sections or by securing the rear ends of the sections to supporting members at the rear of the wall recess. Thus, spacing members can be secured to the flanges of the sections at or near the rear of the sections, where the sections are made up of flanged elements. The supporting members can be provided in the wall at the rear of the recess to which the rear of the sections can be secured. Provision can thus be made in the recess in which the cabinets are to be installed for supporting the rear end of sections as by wooden backing studs secured in the masonry to which the rear ends can be secured by screws, etc. so that when the cabinet is installed the sections will be rigidly held in proper spaced relation.

The cabinet as a whole will require securing to the walls of the recess or to a frame member or frame members installed in the walls such as wooden frame members embedded in the masonry to which the outer edge of the front frame can be secured or to which the cabinet sections adjacent such frame members can be secured.

The invention will be further described in connection with the accompanying drawings which illustrate, in a somewhat conventional and diagrammatic manner, certain embodiments of the invention, but it will be understood that the invention is not limited thereto.

In the accompanying drawings:

Fig. 1 is a front view of a double bedroom sectional cabinet installed in a recess in the wall.

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1.

Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1.

Fig. 4 is a rear view of part of the frame of Fig. 1 on an enlarged scale showing studs welded thereto.

Fig. 5 is an enlarged sectional view through the frame and front flange showing the securing of the flange to the frame.

Fig. 6 is a detail view showing one form of spacing device secured to the flanges of two adjacent sections for securing the sections in spaced relation near their rear ends.

Fig. 7 shows one form of the sections, in perspective, and with the top, bottom and intermediate flanged members spaced apart from each other.

Fig. 8 is a rear perspective of a modified form of the intermediate section of Fig. 7.

Fig. 9 is a perspective of a modified form of cabinet for a single patient room.

Fig. 10 shows the rear of part of the frame of the cabinet of Fig. 9, this frame being made of T-shaped metal.

Fig. 11 is a cross-section of the frame of Fig. 10 with the flange of the cabinets secured thereto.

Fig. 12 shows a front view of a modified sectional frame member of angle iron.

Fig. 13 is an enlarged horizontal sectional view showing the angle iron frame of Fig. 12 with clips secured thereto, before the adjacent sections are assembled.

Fig. 14 shows the sections of Fig. 13 in assembled relation.

Fig. 15 is a detail view showing the corners of four

adjacent sections of the angle iron frame secured together.

Fig. 16 is an enlarged section of the spacing device of Fig. 14.

Fig. 17 shows an end view of the spacing device of Fig. 16.

Fig. 18 shows one form of spacing device for spacing the rear of the sections vertically from each other, and

Fig. 19 is a horizontal sectional view through one of the sections having a modified construction, with access panels provided in the wall of the section which are removable to permit access through the section to the space in the rear.

In the drawings Fig. 1 shows the front of a double bedroom cabinet installed in a recess in the wall of a hospital room, and Figs. 2 and 3 show vertical and horizontal sections of this cabinet.

The front frame to which the cabinet doors are secured, and to which the flanges of the abutting sections are also secured, is shown in Fig. 1 as a unitary frame with side members 1 and 2, top member 3, bottom member 4, vertical members 5 and horizontal members 6, these various members being the members to which the cabinet sections are secured, and by which they are rigidly supported at their front ends. Secured to the frame are doors 7 for the bottom sections, doors 8 for the top sections and doors 9 for the intermediate side sections. Drawers 10 and 11 are located in the intermediate lower section of the cabinet. At the rear of an intermediate section a mirror or medicine cabinet 12 is secured.

The back of the frame as shown in Figs. 4 and 5 has studs 13 which are in spaced relation corresponding to the openings in the flanges of the sections.

One section of the cabinet, and one form of construction of this section, is illustrated, in perspective, in Fig. 7, with the parts separated from each other. This section is made up of a top element 14, a bottom element 15, and an intermediate side element 16, each having laterally extending flanges 17 with holes therein by which the elements are bolted together, advantageously with a compressible gasket between the flanges, and each having a front outwardly extending flange 18 by which the sections are secured to the front frame. The top and bottom members of the sections are advantageously made by drawing or stamping flat sheet metal by heavy presses and are made of one-half unit height so that, by uniting the top and bottom without the intermediate element, a section of unit height is formed. And the intermediate element is made by bending flat sheet metal in a bending machine, and is advantageously of unit, or multiple unit, height so that, when the top, intermediate and bottom elements are secured together, the section will be of multiple unit height.

Fig. 8 shows a modified form of the intermediate side elements of Fig. 7. The intermediate member is made of two halves 16a and 16b with flanges 19 extending outwardly at the back by which these two halves can be secured together to form an intermediate element corresponding to that of Fig. 7.

The making of the individual sections of top, bottom and intermediate elements, as shown in Figs. 7 and 8 enables these elements to be fabricated at the factory and shipped in knock-down form and assembled into the individual sections at the hospital. The sections can also be assembled at the factory and shipped as individual sections for assembly with the frame at the hospital. And where the individual sections are made of metal welded together, these sections can similarly be fabricated at the factory and shipped to the hospital and assembled with the frame at the time of installation of the cabinet.

The sections are secured to the frame member by their outwardly turned front flanges. The frame shown in Figs. 1 to 5 has threaded studs 13 welded to the rear of the frame in spaced relation corresponding to holes in the outwardly extending flanges of the cabinet sections. As illustrated in Fig. 5, a gasket 21 is arranged between

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the frame member and the flange, and a nut 22 is threaded on the stud to hold the flange against the frame with compression of the gasket to give a vermin-proof and dust-proof seal. The gaskets will be provided with holes corresponding to the holes in the flanges and are made of compressible material, such as neoprene, etc., which has a long life and which, when compressed, will give a vermin-proof and dust-proof seal.

One form of spacing element for securing adjacent sections together in spaced relation near the rear of the sections is shown in Fig. 6 in the form of a plate 23 bolted to the horizontally extending flanges 17 of adjacent sections.

A modified form of cabinet for a single patient bedroom is shown in perspective in Fig. 9 with a modified form of frame of T-shaped cross-section, shown in Figs. 10 and 11, with the frame members indicated by the same numerals as in Fig. 1 with *a* appended thereto. This frame, like that of Fig. 1, can be fabricated at the factory with openings corresponding to the front ends of the sections to be secured thereto in the finished cabinet. The making of the frame of T-shaped cross-section increases its rigidity and enables thinner metal to be used than with a flat frame, as shown in Fig. 1. This frame is secured to the front ends of the sections of the cabinet in a manner similar to that described in connection with Figs. 1 to 5.

Where the cabinet is not installed in a recess which encloses the cabinets at both sides and at its rear, and where one or more sides of the cabinet are exposed in the hospital room, side, or side and top, or side, top and bottom members are provided and secured to the frame to give a finished appearance on the exposed portions of the cabinet.

A modified form of cabinet with the frame made of angle iron, and in sections corresponding to the front ends of the cabinet, is shown in Figs. 12 to 15. The angle iron frame has a front section of the angle iron 25 to which the flanges of the sections are secured and a rearwardly extending portion 26 by which the sections of the frame are secured together. The securing means shown is a clip 27 welded to the rearwardly extending portion 26 of the angle iron and in which the rearwardly extending section 26 of the adjacent angle iron frame member is secured. A detailed illustration of the arrangement of the sections before they are joined together, is shown in Fig. 13, and in assembled relation in Fig. 14. Fig. 15 shows four adjacent sections of the angle iron frame secured together by the clips. With this arrangement, the individual sections of the front frame can be secured to the front ends of the sections of the cabinet at the factory, and the frame and cabinet sections assembled at the hospital when the cabinet is installed.

With such a sectional frame, the entire frame will be located within the opening in the wall and to close the narrow space between the edges of the cabinet and the wall, finishing strips 28 are provided having rearwardly extending portions 29. Clips 27 are also provided for holding these finishing strips in place.

In Fig. 18 is shown one means for securing the superposed sections together in spaced relation at their rear ends. Vertical elements 30, with upper and lower flanges 31 and 32 are bolted to the flanges 17 of adjacent sections. With such spacing elements for holding the superposed vertical sections in spaced relation, and with horizontal elements such as shown in Fig. 6 for holding units spaced apart horizontally, the rear ends of the sections can be secured together in rigid overall assembly with the different sections spaced apart, both vertically and horizontally at their rear ends, while they are similarly held by the frame member at the front ends.

In Fig. 19, which is a horizontal sectional view through the tall side section of Fig. 2, the back wall of the section is provided with an opening and a removable access panel 38, removably secured in place over this

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opening so that by removing this panel access can be had through the back of the section to plumbing fixtures which may be located back of the cabinet. A similar access panel (not shown) can be similarly arranged in the side wall of the section where the cabinet is so located that the plumbing can be reached through such an access panel. Such an access panel can be located in the rear of an intermediate section instead of a side section.

The multiple unit cabinet, located in a wall recess, is secured in place, advantageously by fastening the cabinet to frame members which are included in the masonry walls of the recess. One means for securing the sections adjacent the side walls of the recess to these walls is illustrated in Fig. 14 by welding adjustable threaded tubular spacing members 33 and 33a to the side of the cabinet section near the frame and by screws 34 passing through these tubular spacing members and into the wooden frame member 35, which is shown as embedded in the masonry wall. As shown in Figs. 16 and 17, the spacing members are made of two parts, the part 33 being welded to the side of the cabinet section, and the part 33a being adjustable thereon to permit adjustment for varying distances between the wall of the cabinet and the frame. The part 33a has a square opening 33b in the end by which it can be turned by a square headed tool, after the cabinet is in place, to adjust the length of the spacing members until the end of the member 33a abuts against the frame member to which the cabinet section is to be screwed by the screw 34.

The rear ends of the sections can be similarly secured to wooden or metal strips located at the back of the wall recess, as illustrated in Figs. 2 and 3, where wooden strips 35 are shown embedded in the rear of the recess and screws 36 pass through openings in the back walls of the sections and through adjustable spacing members 37, similar to those of Figs. 16 and 17, and into these wooden strips.

The multiple unit cabinet of the present invention has the advantage that the sections can be made in unit and multiple unit sizes to meet a wide variety of requirements. The individual units may be of multiple unit height to accommodate the clothing of the patient and of smaller size to accommodate luggage or blankets, or other hospital supplies, and may have drawers for apparel, etc. The overall height of the cabinets is advantageously similar to that of the height of the doors in the hospital room which is a convenient height for permitting access to all of the cabinet sections, including those at the top of the cabinet.

The particular combinations of sections illustrated in the drawings for two-patient bedrooms and single-patient bedrooms are typical and can be varied. Various sections of unit or multiple unit size can be combined in different combinations for use not only in bedrooms but also in hospital areas which are not bedrooms, and in other buildings than hospitals.

The multiple unit cabinets are of special value for installation in wall recesses, as illustrated in Figs. 1-3, and give a new combination of wall recess and cabinets with the recess having frame members therein to which the cabinets are secured.

The multiple unit cabinets are also of value for use in room corners and against room walls where the rear of the cabinet is against the wall and where the cabinet extends out into the room. In such case, the side or sides which extend into the room will have a side cover attached to the frame and cabinet and also a separate top, as illustrated in Fig. 9.

Whether the multiple unit cabinets are installed in a wall recess or extend out into the room, they will have their front sections flanged and secured to the front frame and will have their rear portions spaced apart and secured together in spaced relation to give a unitary multiple unit cabinet with the sections held properly spaced both at their front and rear ends.

It will be understood that variations and modifications can be made in the invention without departing from the spirit and scope thereof.

I claim:

1. A sectional hospital cabinet having a front frame with top, bottom, side and intermediate frame members spaced apart and forming openings therebetween corresponding to the open front ends of a series of individual cabinet sections, said frame members being secured together to form a rigid front frame extending around and between said openings, a plurality of cabinet sections of sheet material having closed sides, tops, bottoms and backs and open fronts, the junctures of the sides, tops, bottoms and backs being rounded to facilitate removal of dirt and the like, said cabinet sections having at the sides, top and bottom of their front ends outwardly-extending right-angle flanges, means for securing said flanges directly to the back of the front frame with the several cabinets directly back of and aligned with the respective openings of the frame, whereby the cabinet sections are rigidly held to the frame in spaced relation at their front ends, the openings in the frames being at least as large in all directions as the insides of the open front ends of the cabinets secured behind the respective openings so that the portions of the frame defining the openings do not extend opposite any portion of the open ends of the cabinets to form obstructions to interfere with the removal of articles from the cabinet or corners in which dirt or the like may collect, and means supporting and holding the cabinet sections in spaced relation at their rear ends.

2. A sectional hospital cabinet having a front frame with top, bottom, side and intermediate frame members spaced apart and forming openings therebetween corresponding to the open front ends of a series of individual cabinet sections, said frame members being secured together to form a rigid front frame extending around and between said openings, a plurality of cabinet sections of sheet material having closed sides, tops, bottoms and backs and open fronts, said cabinet sections being formed of vertically-superposed sections having outwardly-extending flanges at their meeting edges and means secur-

ing said flanges together, the junctures of the sides, tops, bottoms and backs being rounded to facilitate removal of dirt and the like, said cabinet sections having at the sides, top and bottom of their front ends outwardly-extending right-angle flanges, means for securing said last-mentioned flanges directly to the back of the front frame with the several cabinets directly back of and aligned with the respective openings of the frame, whereby the cabinet sections are rigidly held to the frame in spaced relation at their front ends, the openings in the frames being at least as large in all directions as the insides of the open front ends of the cabinets secured behind the respective openings so that the portions of the frame defining the openings do not extend opposite any portion of the open ends of the cabinets to form obstructions to interfere with the removal of articles from the cabinet or corners in which dirt or the like may collect, and means supporting and holding the cabinet sections in spaced relation at their rear.

3. A sectional hospital cabinet as set forth in claim 2 in which the means for supporting and holding the cabinet sections in spaced relation at their rear are fastening means at the rear wall of the cabinets for securing them to an opposing wall structure.

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