

Dec. 23, 1958

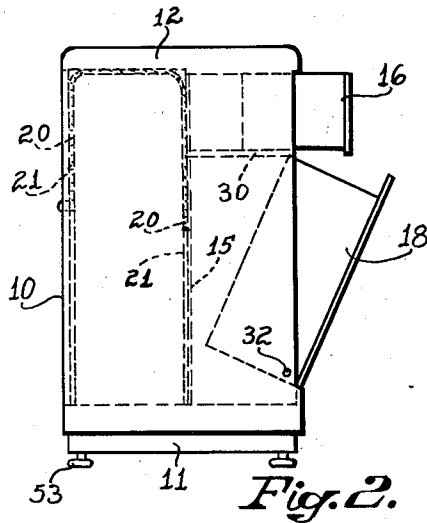
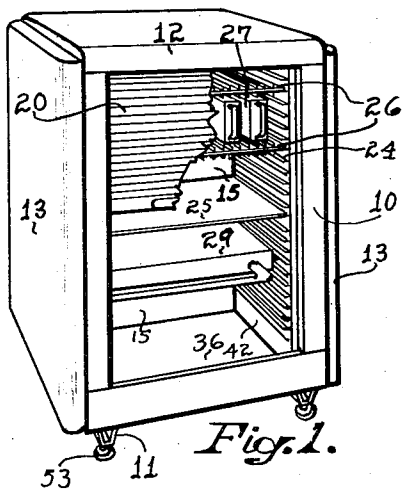
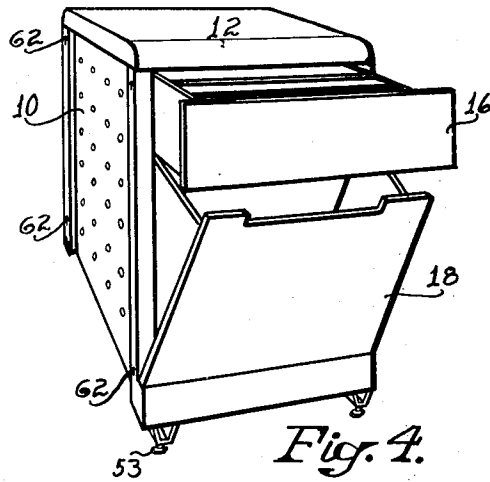
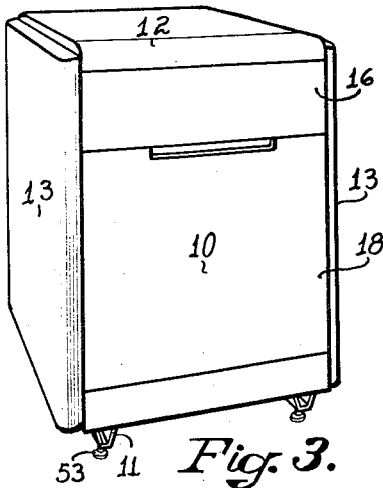
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UTILITY CABINET FOR A BUSINESS MACHINE

Filed Sept. 12, 1952

3 Sheets-Sheet 1



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Fig. 5.

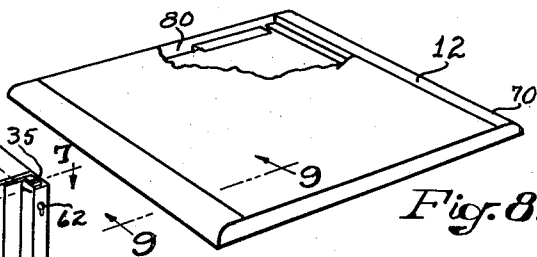
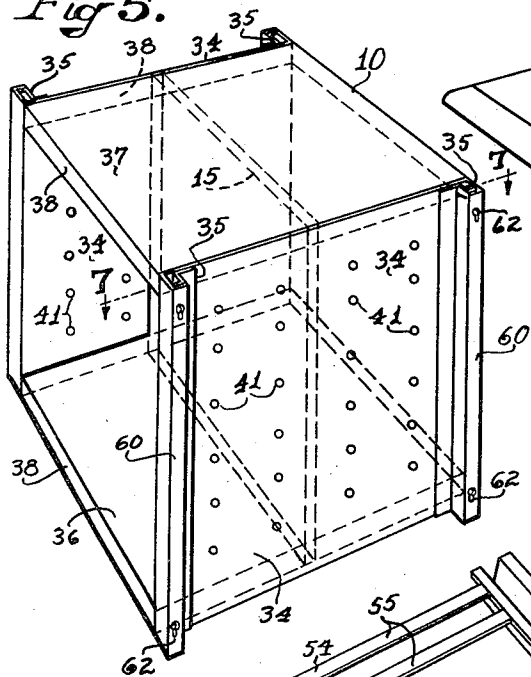


Fig. 8.

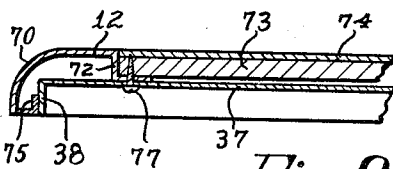


Fig. 9.

Fig. 6.

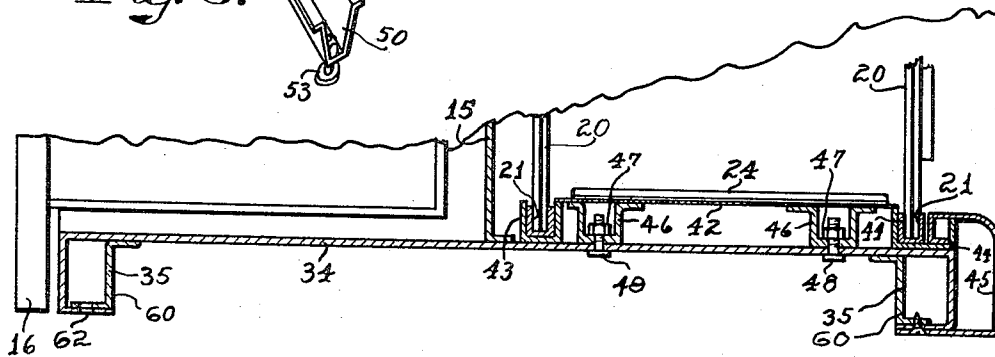
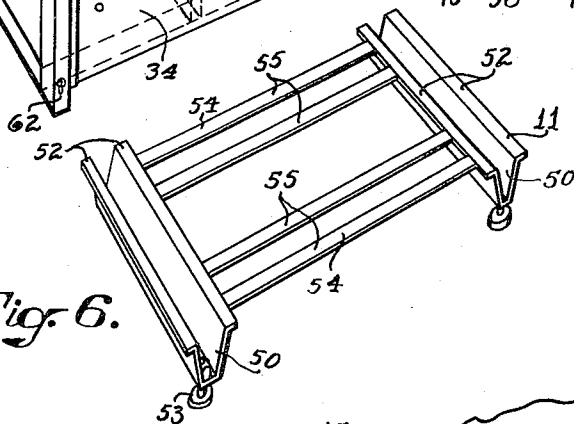


Fig. 7.

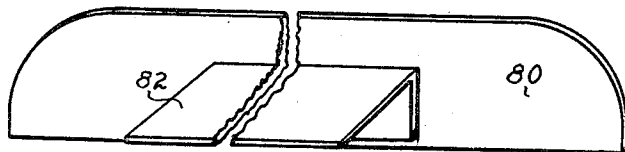


Fig. 13.

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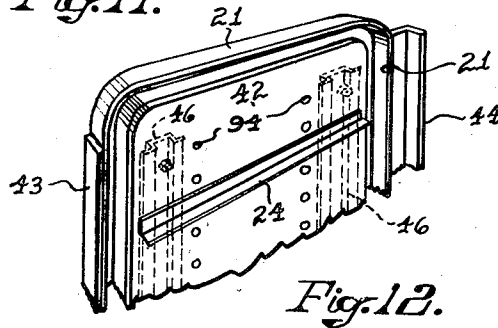
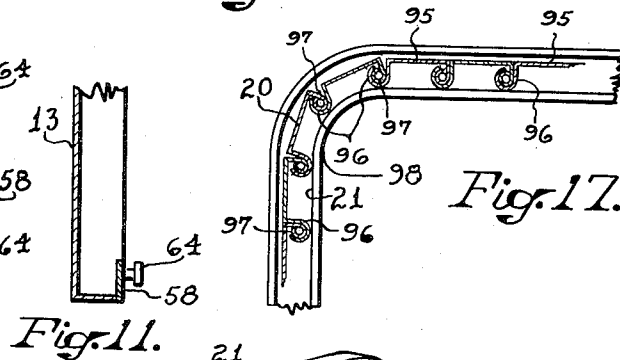
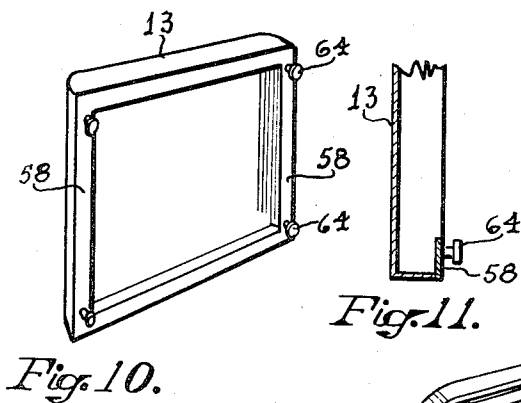
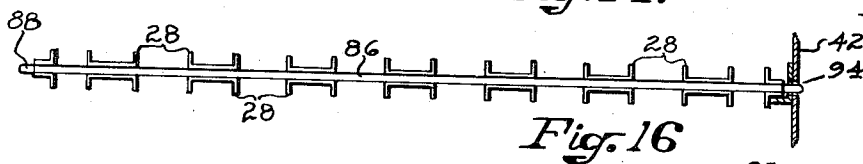
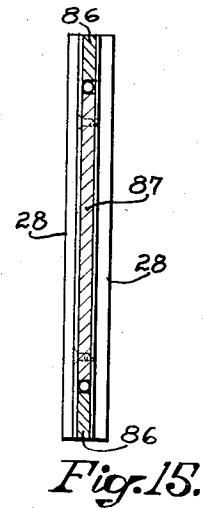
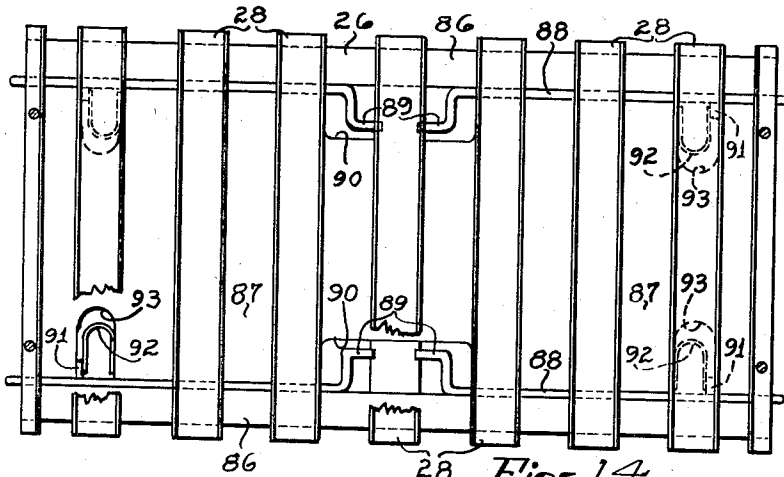
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UTILITY CABINET FOR A BUSINESS MACHINE

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2 Claims. (Cl. 312—309)

This invention relates to a utility cabinet which is used particularly in association with an electric accounting machine. Electric tabulating and other business machines require storage space for program tapes and electric panel boards which control the machine operation as well as for storing various other accessories. There are many sizes, shapes and types of panel boards and program tape receptacles used with such a machine, and it is desirable that the cabinet be so constructed that it may be quickly adapted for many combinations and arrangements of the panel boards and other storage units. It is also desirable to provide a cabinet casing which may be interfitted with the end of the machine or with other cabinets so as to make a continuous business unit.

The primary object of this invention is to satisfy such requirements and to provide a base unit for a cabinet casing which may be readily adapted for various purposes.

A further object is to provide a utility cabinet of the above type modified by the addition of accessory parts providing for tambour slideways and supports for shelves and various receptacles.

A further object is to provide a cabinet unit which has oppositely opening storage spaces, and wherein one or both may be closed by a tambour cover slidably mounted on accessory parts of the casing.

Still another object is to provide adjustably movable horizontal shelves having opposed slideways which provide for the compact storage of vertical receptacles, such as electric panel boards, of various shapes and sizes and many arrangements and combinations.

Other objects will be apparent in the following disclosure.

Referring to the drawings illustrating a preferred embodiment of the cabinet:

Fig. 1 is a perspective view of the front of the cabinet with the tambour cover partly broken away to show the interior;

Fig. 2 is an end elevation showing the general arrangement of the partition and storage compartments;

Fig. 3 is a rear perspective view of the cabinet in a closed position;

Fig. 4 is a view similar to Fig. 3 with the containers in an open position;

Fig. 5 is a perspective view of the casing framework prior to assembly;

Fig. 6 is a perspective view of the bottom support on which the casing is to be fastened by welding;

Fig. 7 is a fragmentary sectional view on the line 7—7 of Fig. 5;

Fig. 8 is a view partly broken away of the cover structure;

Fig. 9 is a fragmentary section on the line 9—9 of Fig. 8;

Fig. 10 is a perspective view of the rear of an end panel;

Fig. 11 is a fragmentary sectional view of the end panel;

Fig. 12 is a fragmentary perspective detail showing the arrangement of an end plate, the tambour track and a supporting flange for carrying one of the shelves;

Fig. 13 is a detail in perspective of a wall of the cover shown in Fig. 8;

Fig. 14 is a plan view of a horizontal shelf arranged

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to support vertical partitions and interlock with the casing wall;

Fig. 15 is a transverse section of the shelf;

Fig. 16 is a side view of the shelf and a portion of a casing wall cooperating with the shelf lock; and

Fig. 17 is a fragmentary detail of the track and slidable closure.

The utility cabinet comprises a casing frame 10 (Fig. 5) which is welded to a separate base structure 11 (Fig. 6) and has thereafter applied to it a top panel 12 (Fig. 8) and removable end panels 13 (Fig. 10). Either or both of these end panels may be readily removed and the main casing interfitted with and bolted to a similar or different structure, such as an accounting machine. The structure 10 of Fig. 5 is an interior base unit adapted to have the outside elements secured thereto. It is open at the front and the rear, but its end, top and bottom walls provide a rigid casing unit or framework within which may be secured various constructions which provide for the storage of panel boards and other business machine utilities. For convenience in storage and removal of the supplies, the casing is preferably divided into two compartments by means of a central partition 15. The compartments on opposite sides of this partition may have duplicate or different structures. In Figs. 3 and 4, a slidable drawer 16 mounted on a suitable trackway and a tilting container 18 are illustrated. The front compartment, as well as the rear if the parts 16 and 18 are not employed, may be closed by a tambour or flexible wall 20 mounted on suitable slideways or grooved tracks 21 carried by accessory supports inside of the basic casing 10. A considerable number of horizontal slideways 24 are secured within the base casing and preferably on accessory mounting plates. These carry shelves, such as the flat shelf 25 but preferably removable slideway shelves 26 arranged to carry certain types of panel board containers 27. For this purpose, the shelves 26 are provided with parallel vertical flanges 28 providing slide grooves within which the panel boxes 27 are slidably mounted in a vertical arrangement. The containers may have vertically aligned guides or flanges fastened on their top and bottom portions which cooperate with the guiding slideways 28 on the shelves 26. Further containers 29 (Fig. 1) may be directly mounted horizontal on the supports 24.

At the other side of the central partition 15, a pair of horizontal slideways 30 (Fig. 2) project from opposite side walls of the casing and support the drawer 16 on rollers or in accordance with standard construction. The container 18 of Figs. 2 and 4 is shown as a tiltable casing of generally rectangular cross section which is rockingly mounted at 32 on suitable bearing posts projecting inwardly from the ends of the cabinet and near the bottom of the container 18. These parts are so arranged that the container may be tilted outwardly to the position shown in the Figs. 2 and 4 where the forward motion thereof is limited by a suitable stop.

The main casing, as shown primarily in Figs. 5 and 7, comprises two opposed inner end plates 34 which are bent at their vertical ends to form two inwardly opening channels. A Z-shaped plate 35 is inserted in each channel (Fig. 7) and welded into position so as to form a hollow post at each of the four corners of the casing. These four posts may be made separately and welded to the plates. A bottom plate 36 (Fig. 5) and a top plate 37 have each a projecting peripheral flange 38 extending around the entire plate, thus forming a pan shape. The lower pan 36 opens upwardly and its side flanges 38 are spot welded at various points to the side wall 34. Similarly, the upper plate 37 has its pan-like opening facing downwardly and its flanges 38 are likewise spot welded

to the two end plates 34. Thus these end plates and the two pins form a hollow box structure which is open at the front and back as is required for introducing the various compartment features. The central partition 15 is likewise a pan-shaped member and it is stood vertically and centrally or otherwise located as desired. It is shaped and arranged to be fitted in between the bottom and top pans 36 and 37 and securely welded thereto.

The side plates 34 are provided with a series of spaced bolt openings 41 which are arranged for securing various structures, such as parts forming the slideways for the horizontal shelves. As shown particularly in Figs. 7 and 12, a vertical panel plate 42 has a series of L-shaped angle irons 24 welded thereto in a proper spaced relationship to form slideways for holding the shelves 25, 26 and other parts. There are two panels 42 on opposite sides of the casing with the L members projecting inwardly in aligned horizontal arrangement to form the shelf supports. Each panel plate 42 is bent, as shown in Fig. 12, to form two vertical U-shaped channels 43, 44 on opposite sides thereof which are shaped to hold a slideway channel iron 21 (Fig. 7) in which the flexible cover 20 rides. This channel iron may be secured in place as by welding. The right hand channel 44 is made wide enough so that it will support an ornamental piece 45 that is shaped to provide a pleasing appearance for the corner of the cabinet. This piece is suitably attached by screws to the posts 35. Two U-shaped channel members 46 of the cross sectional shape shown in Fig. 7 are welded to the plate 42. These carry nuts 47 welded at the base of the channel opposite to the plate 42, and the channel iron 46 has perforations therethrough arranged to be aligned with suitable holes 41 (Fig. 5) in the end plate 34. Threaded bolts 48 may be passed through these aligned holes and screwed into the nuts 47, thus serving to hold the plate 42 and the L-shaped shelves 24 suitably located.

Prior to the assembly of the end panels, the main casing 10 is placed on the base 11 and suitably welded thereto. This base (Fig. 6) comprises two substantially U-shaped upwardly opening channel irons 50 having horizontal flanges 52 aligned in a horizontal plane. If desired, the channels may be provided with feet 53 or castors suitably mounted within holes in the channel iron. The two channel irons 50 are connected together by two U-shaped channels 54 which likewise have horizontal flanges 55 lying in the same plane as the flange 52 of the front and rear channel members 50. The casing 10 of Fig. 5 is set on top of these flat members 52 and 55 and the bottom pan 36 of the casing is suitably spot welded thereto so as to make an integral structure.

Each end panel 13 (Figs. 10 and 11) is made of pressed steel and provided with a U-shaped peripheral portion having an inwardly turned flange 58 lying in a plane and adapted to fit against the outside surfaces of the vertical corner posts 35, including the ornamental plate 45 which is secured to the front face of the post at the right hand side of Fig. 7. The corner post is formed of the Z-shaped member 35 and the outwardly turned portion of the plate 34. They are provided with aligned holes which serve as bayonet slots 62 (Figs. 5 and 7). These slots are shaped somewhat like a teardrop, in that they have a narrow slotted portion at the bottom and a large opening at the top. The large opening is large enough for the insertion of the head 64 of a bolt which is threaded into the flange 58 of the cover plate 13. That bolt head 64 is spaced from the outside of the flange by a sufficient distance to permit the bolt heads at the top and bottom of the panel 13 to enter the suitably located bayonet slots 62 and the shank to ride down into the narrow part of the slot where the head engages the inner surface of the Z-shaped brace 35. Thus the panel 13 is readily put into position or removed by lifting it out of the slot fastenings as required. If the cabinet is to be placed

next to another cabinet of similar or different design and construction, it is merely necessary to take off the end panel 13 and fasten the two cabinets together by means of bolts or bayonet attachment members suitably positioned.

The cover 12 for the cabinet (Figs. 8 and 9) comprises two metal pieces bent, as shown in Fig. 9, to provide a curved corner portion 70 to match the design of the rounded corner parts of the end panels, and it has an L-shaped flange 72 projecting inwardly and providing a horizontal surface adapted to support a cover plate. The latter is made preferably of a wooden body 73 carrying a panel or plate 74 made of laminated paper bonded by a phenol formaldehyde condensation product or other suitable molded plastic material. The top pan 37 is welded in place to the under side of the flange 72 and the flange 38 of the pan is likewise welded to an upstanding flange 75 formed on the curved portion 70 for the purpose. After the pan has been welded in place, the wooden top 73 is secured by screws 77 passing through the pan 37 and the flange 72 into the wooden body 73. The two end pieces 70 are welded at their edges to two oppositely arranged plates 80, each of which (Fig. 13) comprises a thin sheet metal member having welded to its inner side face an L-shaped angle iron 82 which cooperates to support the top 73 and panel 74.

The shelves 26 may be removably secured in various locations on any of the L-shaped supports 24 that are carried by the vertical panel plate 42. As shown in Figs. 14, 15 and 16, these shelves 26 are preferably formed of two parallel steel bars 86 welded to the spaced U-shaped channel members 28. The space between the channel members 28 is filled with a suitable plate, such as a member 87 made of Masonite, which substantially fills the space between the bars 86. The locking members comprise sliding rods 88 which have inwardly turned finger grips 89 which are shaped to lie within a slot 90 cut out of the central Masonite member that forms the bottom of the shelf. Each of the slide rods 88 has a lug 91 welded thereto and projecting inwardly. One end of a U-shaped spring 92 lies in another slot 93 in the Masonite and presses against a shoulder of the slot while the other end engages the lug 91 on the slide rod 88. Thus this spring tends to hold the projecting ends of the slide rods 88 outwardly disposed in suitable holes 94 formed in the vertical plate 42 and suitably located between the shelf supporting flanges 24. Thus the shelf may be removably mounted by gripping the two inwardly projecting ends 89 of the slide rods and drawing the slide rods inwardly against the pressure of the spring 92. The shelf may then be inserted in place on any particular set of flange supports 24, and the spring pressed rods 88 released, whereupon they will enter the holes 94 in the plate 42 and thus hold the shelf in place. Two of these shelves in the spaced arrangement of Fig. 1 will serve for supporting vertical bodies or containers 27 (Fig. 1) that are slidably mounted in the U-shaped channels 28. Thus a number of vertical containers may be secured side by side in a space which may be used for other purposes merely by taking out the removable shelves.

As shown in Figs. 7, 12 and 17, the track 21 in which the tambour cover slides is a continuous channel iron bent into a U shape and having its curved corner portions of such a radius that the tambour 20 may slide easily within the channel as is required by the covers to be raised or lowered to position. That track is assembled in the two vertical channels 43 and 44 which are integral with the plate 42 and suitably secured in place as by welding. The two channels 21 on opposite sides of the casing face inwardly toward each other and extend from near the front of the casing to a position at the rear of the shelf supports 24 but in front of the central partition 15. This tambour cover 20 may comprise various constructions, but it is shown in Fig. 17 as made of a series of metal plates 95 bent at their opposite edge portions.

to provide a large rounded or part cylindrical hinge portion 96 at one end interfitting with a smaller part cylindrical hinge portion 97 at the opposite end of the adjacent metal strip. These rounded hinge portions of the strips 95 are slid sideways into an interfitting relation, and the curved portions are so constructed that the hinged joint formed by the large and small parts 96 and 97 will provide for the tambour riding around the curved portion 98 of the track 21. The tambour cover 20 normally lies in the front portion of the track 21 when in a closed or partially closed position. To obtain full access to the shelves, it is merely necessary to lift the flexible cover by means of a suitable handle at its lower end and slide it upwardly and around in the horizontal portion of the track and downwardly in the vertical descending track portion at the rear of the shelves. Thus this flexible tambour serves to enclose the contents at the front of the casing without interference with the operation of the slide drawer 16 and the tilting compartment 18 at the rear.

This construction lends itself to various uses. Any number of the movable shelves 26 shown particularly in Figs. 14, 15 and 16 may be inserted in desired locations and locked in place by means of the slide rods 88 whose projecting ends interfit with suitable holes 94 in the opposite side walls 42 which carry the shelf supporting flanges 24 (Fig. 12). Since these shelves 26 have flanges or channels 28 in vertical opposition extending rearwardly, as indicated in Fig. 1, storage receptacles 27 may be removably inserted in a parallel vertical arrangement between these shelves 26.

The operation of the cabinet parts has been set forth. Also, it will be appreciated that this utility cabinet will serve for storing the various types of equipment employed in connection with a business machine and in a compact and orderly arrangement. The construction lends itself to suitable ornamentation and design, since the removable panels may be shaped in accordance with the design features of the associated cabinet or machine. Hence the cabinet not only has utility but may be kept up to date in its ornamentation and design. Various other advantages will be apparent.

The cabinet comprises primarily the basic frame unit 10 of Fig. 5 comprising two inner end plates 34 and corner posts 60 preferably shaped therefrom. These two end plates with their corner posts are spaced and united in an integral structure by the top and bottom pan-shaped plates 36 and 37 welded thereto, thus forming a hollow unit that is open at the front and back. Closures therefor are provided by the tambour and the fronts of the containers 16 and 18 in the structure of Figs. 1 to 4. The posts 60 project outwardly from their associated end plates 34 and thus provide recesses at each end of the cabinet which may interfit with the end of a business machine inserted therein. Each removable end panel 13 (Fig. 10) is mounted on the outside of the associated posts 60 when the cabinet is used separately or with one end bolted to the business machine. The basic casing structure of Fig. 5 is therefore not modified by the use or non-use of the end panels. That basic casing 10 may have various structures secured within it, as by means of bolts applied through the holes 41 of the end plates 34, and this casing therefore lends itself for building many types of cabinet construction. In the embodiment illustrated in the drawings, the inner end panels 42 are suitably secured to the inner end walls 34 of the casing. These panels 42, therefore, provide a second inner wall spaced from the main inner wall 34 of the casing which is so arranged that the tambour 20 fully encloses the space within the cabinet. To this end, the second inner plate 42 has the vertical U-shaped channels 43 and 44 made integral therewith, and these constitute supports for holding the tambour slideway 21. Also the base unit 11 of Fig. 6 may be suitably secured to the casing unit 10 with its U channels 50 turned in

either direction but preferably so as to conceal the edges of the U portions. This base unit is formed of four channel members welded together into a particularly strong construction, and that base unit is in turn welded to the lower pan 36 of the casing frame 10, so that these two bodies 10 and 11 are rendered integral and the base unit aids in strengthening the main casing framework 10. Similarly, the spaced top members 70 of the cover (Fig. 8) are welded to the top pan 37 so that the cover is made integral with the casing unit. The end plates 80 may also be suitably welded to that top pan 37. It will thus be seen that the basic framework of Fig. 5 forms a unit which may be adapted for many purposes. For example, two similar plates 42 and their associated shelf flanges 24 may be mounted on each side of the central partition 15, together with a tambour slide panel. Thus the panel boards and program tape carriers may be supported on both sides of the partition and in a great number of combinations of different shapes and sizes, due particularly to the fact that the removable shelves 26 may be adjustably positioned to hold various heights of panel carriers. That is, these shelves may be mounted on any of the supporting flanges 24 in the desired spaced arrangements.

Various constructional details may be suitably modified, as will be understood. Hence the above description of a preferred embodiment is not to be interpreted as imposing limitations on the appended claims.

I claim:

1. A utility cabinet comprising two spaced parallel vertical metal end plates having outwardly bent edge portions, vertical corner posts formed in part by said portions which project outwardly and laterally from and are rigid with the end plates, horizontal upper and lower pans, each pan having an outermost rectangular plane surfaced bottom and inwardly projecting strengthening flanges forming a substantially continuous periphery therefor, two of the flanges being integrally united to the inner surfaces of the outer portions of the end plates so that the pans serve as the sole rigid supporting spacers for the plates and form a rigid tubular metal casing having openings at both the front and rear thereof, the other two flanges of each pan forming strengthening cross members for the tubular structure, opposed inner plates having central portions parallel with and spaced from the end plates and inwardly opening vertical channel-shaped end portions which are mounted on the cabinet end plates, shelf supports mounted on said inner plates, a cover secured directly to the top of the upper pan, a support secured directly to the outer face of the lower pan, and means providing a movable closure for at least one of the openings of the casing.

2. A cabinet according to claim 1 comprising a pair of cooperating U-shaped channel irons mounted in the vertical channel portions of the inner plates which provide slideway for a tambour mounted therein.

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