

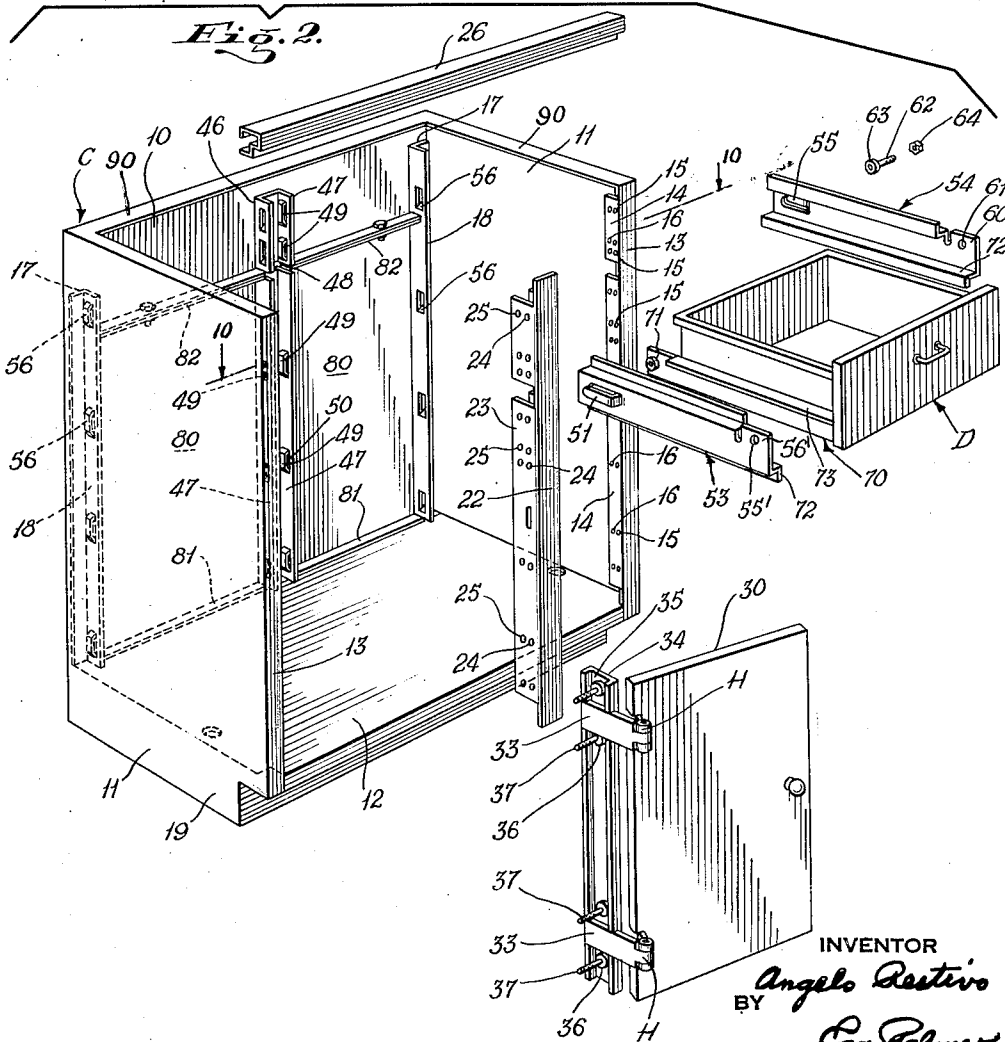
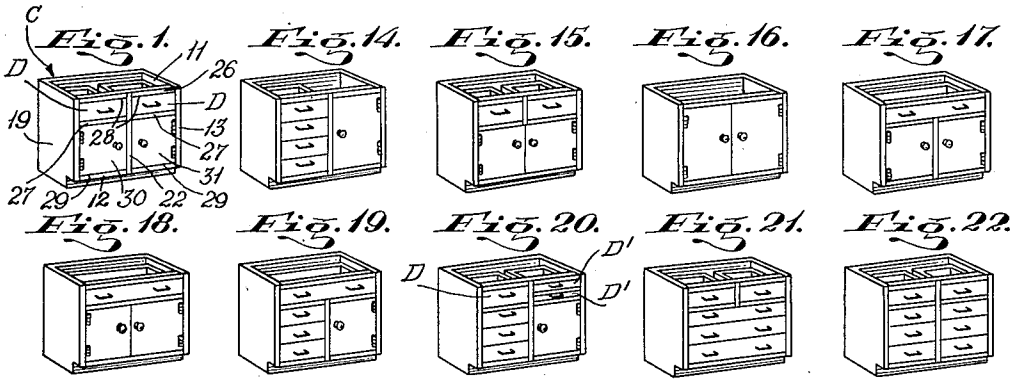
Dec. 2, 1952

A. RESTIVO
INDUSTRIAL CABINET

2,620,252

Filed Feb. 1, 1947

4 Sheets-Sheet 1



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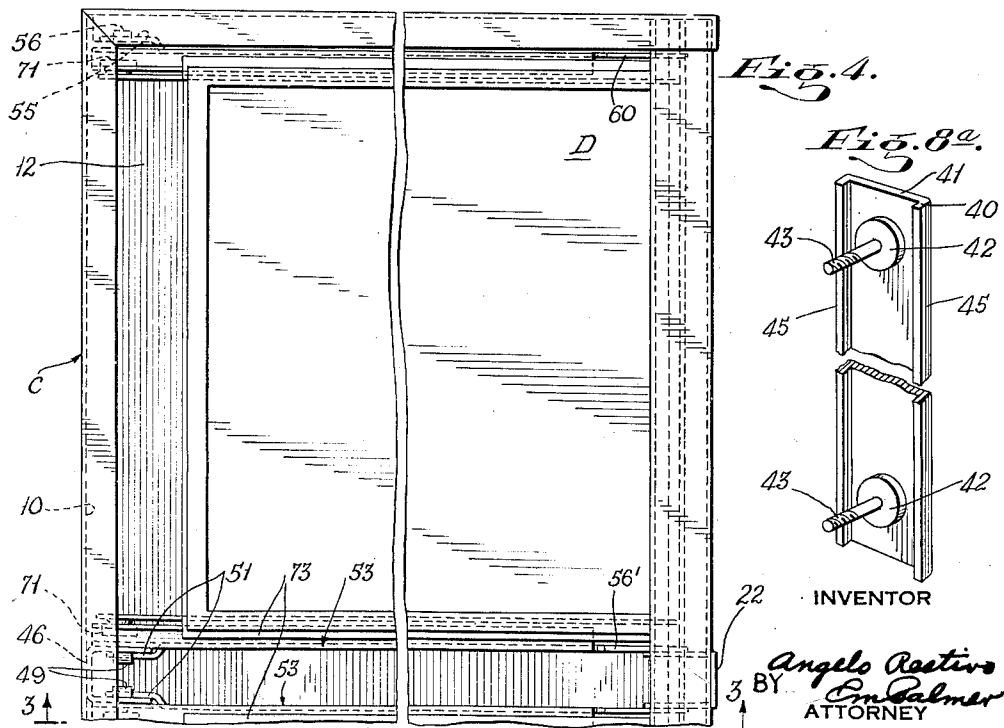
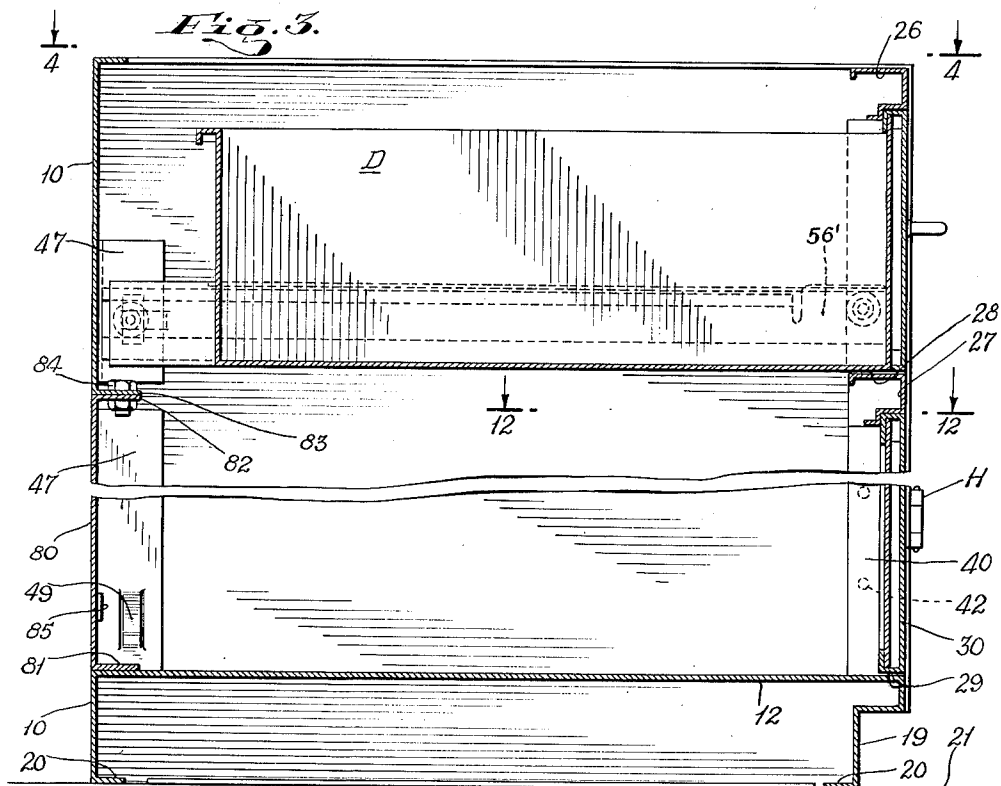
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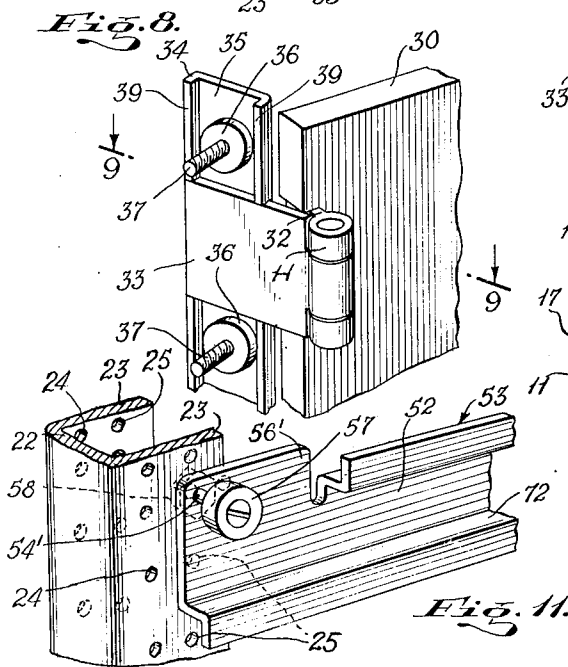
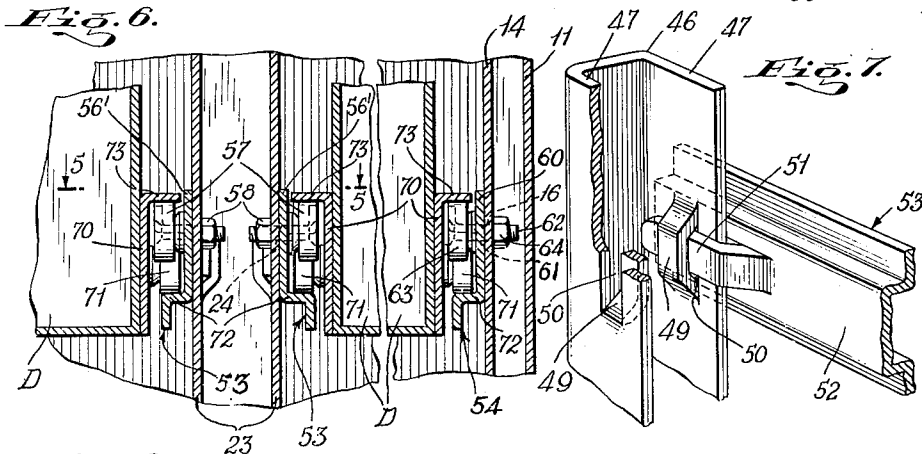
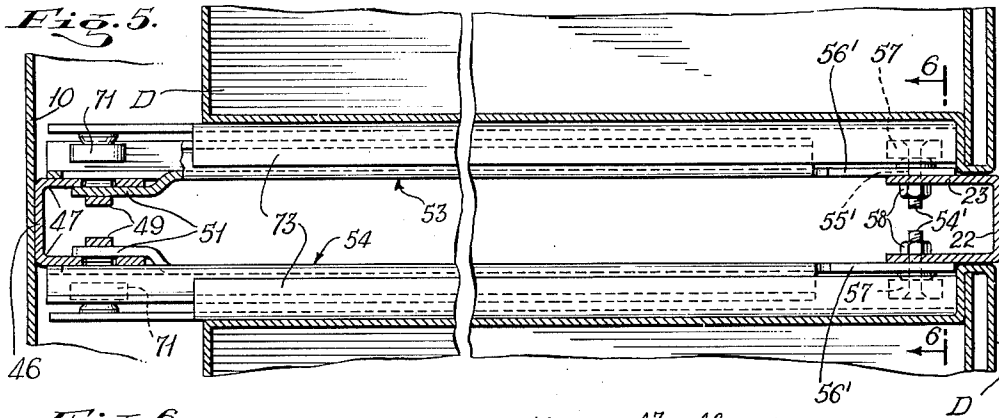


Fig. 11.

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4 Sheets-Sheet 4

Fig. 12.

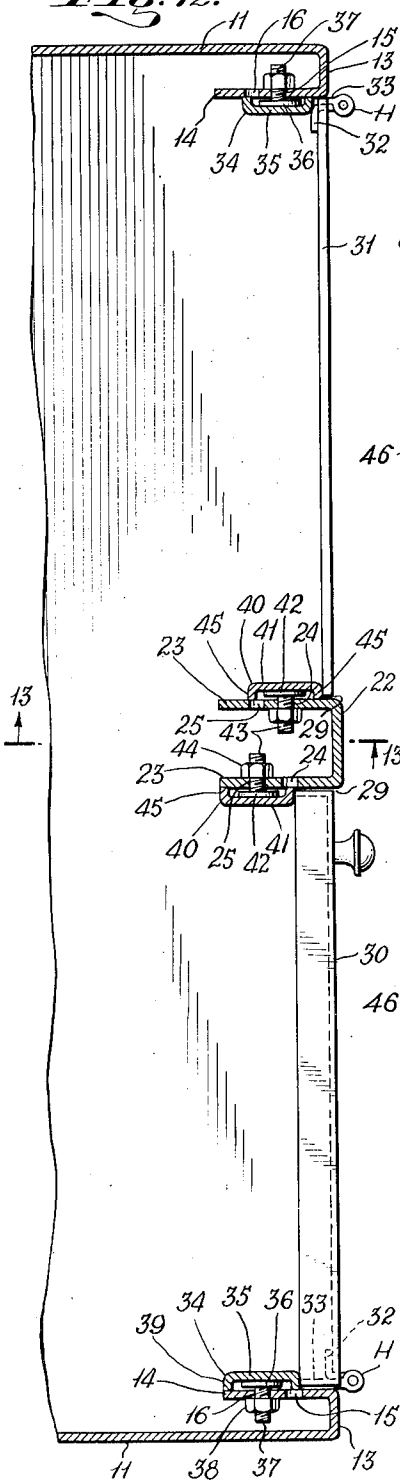


Fig. 13.

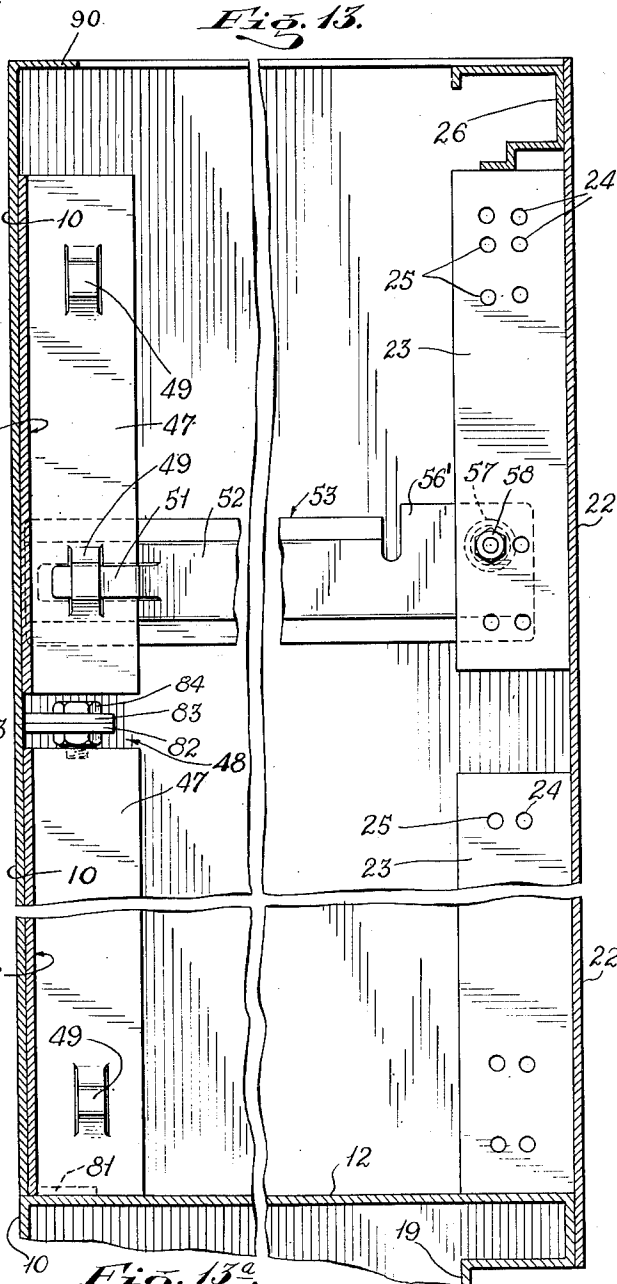
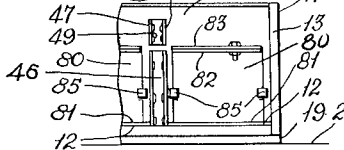


Fig. 13a



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UNITED STATES PATENT OFFICE

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INDUSTRIAL CABINET

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Application February 1, 1947, Serial No. 725,861

7 Claims. (Cl. 312-257)

1

The invention is directed to functionally and structurally improved industrial cabinets particularly applicable for housing miscellaneous apparatus, for storing chemicals and accessories thereof, and for serving as a depository for important specimens and physical exhibits although the invention in its broadest aspect is not limited in these respects. Customer requirements in respect to industrial cabinets of the type alluded to vary appreciably and because of such requirements standardization to cover a large number of various styles of such cabinets is quite difficult. Because of such diversified requirements, the cabinets in a great many instances are practically custom made at the source of manufacture to follow certain dimensions and styles requested by the customer. Obviously this practice was not only expensive but precluded the customer from quickly converting one style of cabinet to another type. One important aspect of the invention is to provide a cabinet of the type alluded to which may be readily standardized dimensionally at the source of manufacture, nevertheless in a majority of cases conveniently convertible by the customer from one type to another to suit certain requirements. Specifically another object is to provide interchangeable doors cooperating with removable channel shaped stops and carrier means for readily converting the cabinet to the particular type desired. A further object is to removably sustain a rail or track on spaced and transversely aligned flanges. Another object resides in the provision of spaced front and rear channel shaped posts having means removably sustaining a rail for slidably guiding a drawer. Another object is realized in the provision of a novel rear post having a plurality of vertically spaced receiving means or eyes severally and removably cooperating with offset rearwardly extending tongue or detent means projecting from the rail. Other salient objects, features and advantages of the invention will appear from the following detailed specification taken with the accompanying drawings wherein:

Fig. 1 is a perspective view of an industrial cabinet according to one style or embodiment of the invention.

Fig. 2 is an enlarged exploded and perspective view of several parts of the cabinet illustrated in Fig. 1.

Fig. 3 is a vertical transverse sectional view of the cabinet illustrated in Fig. 1 however taken on the line 3-3 of Fig. 4.

Fig. 4 is a plan view on the line 4-4 of Fig. 3.

2

Fig. 5 is an enlarged fragmentary and horizontal sectional view on the line 5-5 of Fig. 6.

Fig. 6 is a vertical and broken sectional view of the cabinet however along the plane 6-6 of Fig. 5.

Fig. 7 is a fragmentary perspective view of one of the drawer supporting rails or tracks connected to the rear middle post of the cabinet.

Fig. 8 is a fragmentary perspective view of the door support or carrier.

Fig. 8^a is a broken perspective view of one of the removable channel shaped stops.

Fig. 9 is a horizontal sectional view on the line 9-9 of Fig. 8, illustrating the double paneled swingable hollow door.

Fig. 10 is a horizontal sectional view of the housing taken on the line 10-10 of Fig. 2 however illustrating the front middle post in position.

Fig. 11 is a fragmentary view of the cabinet illustrating a front part of a rail mounted on a rear portion of the front middle post.

Fig. 12 is a horizontal sectional view on the line 12-12 of Fig. 3.

Fig. 13 is a vertical sectional view on the line 13-13 of Fig. 12.

Fig. 13^a is a fragmentary view of the cabinet illustrating the removable closures for the rear wall of the cabinet, and

Figs. 14 to 22 inclusive show in perspective other styles or embodiments of industrial cabinets according to the invention.

Illustrative of the embodiments disclosed the industrial cabinet is generally designated C and is characterized by the sheet metal hollow housing having the rear wall 10 and the side walls 11. Appropriately fastened within the housing and between the side walls 11 is the bottom wall or flooring 12.

The sides 11 are provided with front vertically disposed rims 13 having the inwardly turned flanges 14 each embodying a pair of spaced vertical rows of perforations 15 and 16 (Figs. 2 and 12).

Vertically disposed angle irons broadly denoted 17 (Fig. 2) are fixedly anchored at the rear corners of the housing and against the rear wall 10 to present flanges 18 substantially in alignment with the rearwardly extending perforated flanges 14.

The fixed flooring 12 is coextensive with the length and width of the interior of the housing and in fact projects beyond the reduced lower portion 19 of the cabinet (Fig. 3) which embodies the inwardly turned lower flanges 20 seated on the supporting surface 21.

3

Interposed between the spaced and front vertical rims 13 and preferably welded to the flooring 12 is the U or channel shaped front post 22 provided with spaced and parallel and rearwardly extending flanges 23 each provided with spaced vertical rows of perforations 24 and 25 (Fig. 12).

Appropriately spot welded to the upper and forward portions of the sides 11 of the housing and to middle post 22 is the rabbeted brace or sill 26 (Figs. 1 and 2).

In the form according to Fig. 1, supplemental braces or sills 27 spaced from the upper rabbeted brace 26 are also appropriately welded to the middle post 22 and the sides 11, thus providing two openings 28 through which the drawers D may be withdrawn.

Swingable doors 30 and 31 (Fig. 1) are removably mounted in openings 29 formed by middle post 22, the rims 13, the sills 27 and flooring 12. It will be observed (Figs. 9 and 12) that door 30 for purposes of illustration is hollow and double paneled while door 31 is appreciably less in thickness and is formed from a single sheet of metal.

Each door has anchored thereto leaves or flat arms 32 of the upper and lower hinges each broadly denoted H each including upper and lower pivoted leaves or flat arms 33 welded to spaced upper and lower notched portions of the U or channel shaped carriers 34 (Figs. 8 and 12). By such construction the doors may be swung relative to the carriers or supports 34 and to the inside faces of the webs 35 thereof to each of which heads 36 of the bolts 37 are welded.

Where it is desired to swingably mount the relatively thick door 30 (Fig. 12) the shanks of screws 37 of one of the carriers 34 are threaded through vertically aligned openings 16 of the rear row openings along one of the rearwardly extending flanges 14, thus locating the carrier 34 appreciably away from the outside face of the adjacent rim 13. Clamping means in the form of internally threaded nuts 38 mounted on the threaded shanks of the pins or bolts 37 are utilized to removably hold legs or sides 39 of a carrier 34 against the flange 14.

Channel shaped stops 40 similar to the carriers 34 but devoid of hinges H are removably mounted on the spaced sides or legs 23 of the U-shaped middle post 22 and it will be observed that a web 41 of each stop 40 (Figs. 8^a and 12) has welded thereto heads 42 of the spaced bolts 43 adapted to be threadably received in the aligned and rear openings 25 or the aligned and front openings 24 of the middle post or column 22. Where the double paneled hollow door 30 is used, the shanks of the fixed bolts 43 are threaded through aligned and rear openings 25. In case a single panel door is employed pins or bolts 43 are threaded through aligned and front openings 24. Thereafter the nuts 44 are adjusted to clamp the spaced legs 45 against the flanges or legs 23 of the middle post 22. Of course the front row of openings 15 in the rearwardly extending flanges 14 are in alinement with the front row of openings 24 in the middle post 22 and the rear row of openings 16 in the flanges 14 are in alinement with rear row of openings 25. By the present arrangement it is apparent that a double panel door may be readily removed and in its place a single panel door may be substituted and quickly fastened. The same is true in the case of the substitution of a double panel door for a single panel door.

Preferably welded to the rear vertical wall 10

4

of the housing is a U or channel shaped post 46 (Figs. 2, 5 and 7) having forwardly extending legs 47 interrupted by the aligned gaps 48. Legs 47 are provided with a plurality of struck out but inwardly overhanging and vertically spaced ears or hook receiving means 49 defining a plurality of openings 50 through which a tongue or hook 51 struck out of web 52 of an inside rail or track generally denoted 53 may be selectively and removably projected. A companion outer rail or track 54 (Fig. 2) is also provided with a struck out tongue or detent 55 removably and selectively retained by one of the ears or receiving means 56 struck out of and outwardly overhanging legs or flanges 18 of the fixed corner angle irons 17.

By the present arrangement a pair of tracks 53 and 54 may be readily and removably hooked onto and retained by the rear middle post or column 46 and on one of the corner angle irons 17 and these tracks are utilized to slidably guide a drawer as D. However the forward portions of a pair of companion tracks 53 and 54 are also removably secured to one of the legs or flanges 23 of the front middle post 22 and to one of the front perforated rearwardly extending flanges 14. In this connection the forward part of track 53 (Figs. 2 and 11) is suspended on the partly threaded shank of bolt 54' passing through one of the openings in post 22 and through an aligned opening 55' in a projection or lug 56'. Rotatably retained on the shank of bolt 54' is a roller 57. Also mounted on the threaded shank of bolt 54' is a clamping nut 58 for removably retaining lug 55' against the middle post 22 and for retaining roller 57 in place.

Each track 54 includes a lug 60 (Figs. 2 and 6) having an opening 61 in line with one opening 16 in an adjacent flange 14 of the housing for reception of the shank of the partly threaded bolt 62 on which the anti-friction roller 63 is mounted. The nut 64 holds lug 60 desirably against a respective flange 14 and the roller 63 operatively in place.

For each drawer D, a pair of demountable tracks as 53 and 54 are employed. These may be quickly removed completely from the cabinet or shifted and secured to other locations therein to accommodate similar or other capacity drawers as is well understood.

Each drawer D has welded along its sides the angle irons 70 each carrying at the rear ends thereof a roller as 71 (Figs. 2 and 6) removably seated on the inwardly extending flanges 72 of a companion pair of rails 53 and 54 and outwardly extending flanges 73 of the angle irons 70 are removably seated on a pair of rollers 57 and 63, the arrangement being such that the drawers D may be easily guided on a pair of rails as 53 and 54 and may be conveniently inserted into or withdrawn from the cabinet.

In the form according to Fig. 1 a pair of slidably guided regular or conventional size drawers D are shown above a pair of outwardly swinging doors. In the form according to Fig. 14 four drawers are shown in vertical alinement with a single swingable door to one side of the front middle post. In Fig. 15 the center post is reduced to provide for larger size outwardly swinging doors. In Fig. 16 the center posts as is well understood are completely removed and the cabinet has been converted to take care of two large outwardly swinging doors. In Fig. 17 the upper portion of the middle post has been eliminated to permit the use of a single wide drawer. In Fig. 18 the cabinet has been converted for a sin-

5

gle wide drawer and two conventional size outward swinging doors. In Fig. 19 the cabinet has one large drawer above three smaller capacity superimposed drawers and one conventional sized door. In Fig. 20, two relatively small capacity drawers D' are sustained in a regular small sized drawer compartment. In Fig. 21 two regular sized drawers are shown above three superimposed large size drawers, and in Fig. 22, as in the case of Fig. 21, no doors are utilized, and instead two pairs of regular sized drawers are provided on each side of the front middle post or column.

If desired, removable panels or closures 80 (Fig. 13^a) are provided at the rear of the cabinet, each panel having a forwardly projecting lower flange 81 removably seated on the base or flooring 12 of the cabinet (Fig. 3). These panels each also include a forwardly projecting upper flange 82 removably connected with a companion forwardly projecting flange 83 of the rear wall 10 by suitable bolt and nut means generally designated 84 and offset lugs 85 (Figs. 3 and 13^a) secured to a panel 80 removably engages the rear wall 10 to locate the panel.

Inwardly bent flanges 90 (Fig. 2) of the cabinet housing support a counter or table not shown for concealing the interior of the cabinet which may be readily converted for various types of swinging doors and for diversified capacity sliding drawers and for various combinations of various types of drawers and doors.

Briefly recapitulating, the cabinet is readily convertible for either a double or single panel swinging door. The front transversely arranged perforated flanges 14 and the aligned flanges 18 of the fixed rear angle irons 17 removably sustain an outer rail as 54 to aid in slidably holding a removable drawer as D. Specifically a tongue 55 is adapted to severally and removably interlock with an eye 56 of an outer rail 54 thus removably sustaining the rear end of this rail while the forward end of the latter is disengageably held against the companion forwardly disposed flange 18 by bolt and nut clamping means 62 and 64. The front and rear posts 22 and 46 also serve the purpose of removably sustaining an inner rail as 53 and the removable stops 41 (Figs. 8^a and 12) constitute means to limit inward swingable displacement of a door.

Various changes may be made in details of construction and arrangement of parts without departing from the spirit of the invention or sacrificing any of the advantages thereof inherent therein.

I claim:

1. In a cabinet, a housing having a rearwardly extending and vertically disposed flange provided with vertically aligned and spaced perforations, carrier means, threaded shanks fixedly carried by said carrier means and removably disposed in said perforations, clamping means removably mounted on said shanks for holding said carrier means against said flange, a door, and hinge means having leaves secured to said door and carrier means.

2. In a cabinet, a housing having a rearwardly extending and vertically disposed flange provided with vertically aligned and spaced perforations, channel shaped carrier means having a web and spaced sides, threaded shanks interposed between said sides and fixedly carried by said web and removably disposed in said perforations, clamping means removably mounted on said shanks for holding said sides against said flange, a swing-

6

able door, and hinge means having leaves secured to said door and carrier means.

3. In a cabinet, a housing having a rearwardly extending and vertically disposed flange provided with spaced rows of vertically aligned and spaced perforations, channel shaped carrier means having a web and spaced sides, threaded shanks fixedly carried by said web and selectively removably disposed in either of said rows, clamping means removably mounted on said shanks for holding said sides against said flanges, a swingable door, and hinge means having leaves secured to said door and carrier means.

4. A cabinet adapted to utilize doors severally but of different thicknesses for closing a doorway; flange means extending transversely of said doorway from the front part of said cabinet and including a plurality of horizontally spaced vertical rows of aligned but spaced perforations, carrier means having threaded means receivable in one of said rows for arranging one of said doors to be substantially flush with said part, hinge means having separable leaves secured to said last mentioned door and carrier means, and clamping means removably mounted on said threaded means for holding said carrier means against said flange means.

5. A cabinet adapted to utilize doors severally but of different thicknesses for closing a doorway; flange means extending transversely of said doorway from the front part of said cabinet and including a plurality of horizontally spaced vertical rows of aligned but spaced perforations, channel shaped means having a web and spaced sides, threaded means secured to said web and receivable in one of said rows for arranging one of said doors to be substantially flush with said part, hinge means having separable leaves secured to said last mentioned door and channel shaped means, and clamping means removably mounted on said threaded means cooperating with said web for holding said sides against said flange means.

6. A cabinet adapted to utilize doors severally but of different thicknesses for closing a doorway; flange means extending transversely of said doorway from the front part of said cabinet and including a plurality of horizontally spaced vertical rows of aligned but spaced perforations, carrier means having threaded shanks receivable in one of said rows for arranging one of said doors to be substantially flush with said part, hinge means having separable leaves secured to said last mentioned door and carrier means, and clamping means removably mounted on said threaded shanks for holding said carrier means against said flange means.

7. A cabinet adapted to utilize doors severally but of different thicknesses for closing a doorway; flange means extending transversely of said doorway from the front part of said cabinet and including a plurality of horizontally spaced vertical rows of aligned but spaced perforations, carrier means having threaded means receivable in one of said rows for arranging one of said doors to be substantially flush with said part, hinge means having separable leaves secured to said last mentioned door and carrier means, clamping means removably mounted on said threaded means for holding said carrier means against said flange means, a flange at said front part and extending towards the rear of said cabinet but spaced from said flange means and including horizontally spaced vertical rows of spaced openings in alignment with said perforations, stop means, thread-

7

ed means carried by said stop means adapted to be inserted into either of said rows of openings for arranging said stop means rearwardly of said front part to accommodate the width of said last mentioned door, and clamping means removably mounted on said last mentioned threaded means for holding said stop means against said flange.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
896,671	Swanson	Aug. 18, 1908

Number
1,523,653
1,748,849
1,806,610
1,832,729
1,877,514
1,958,686
2,039,614
2,042,848
2,146,969
2,212,191
2,424,217
2,483,606
2,496,997

8

Name	Date
Larson	Jan. 20, 1925
Schmidt	Feb. 25, 1930
Christensen	May 26, 1931
Ohnstrand	Nov. 17, 1931
Katzman	Sept. 13, 1932
Vanderhoof	May 15, 1934
Tinnerman	May 5, 1936
Horn	June 2, 1936
Marshall	Feb. 14, 1939
Dietz	Aug. 20, 1940
Bales	July 22, 1947
Albach	Oct. 4, 1949
Hallberg	Feb. 7, 1950