No. 892,187. PATENTED JUNE 30, 1908.

E. G. SCHRIEFER.

EXTENSIBLE CASE.

APPLICATION FILED FEB. 3, 1902.

2 SHEETS—SHEET 1.

Fig. 1.

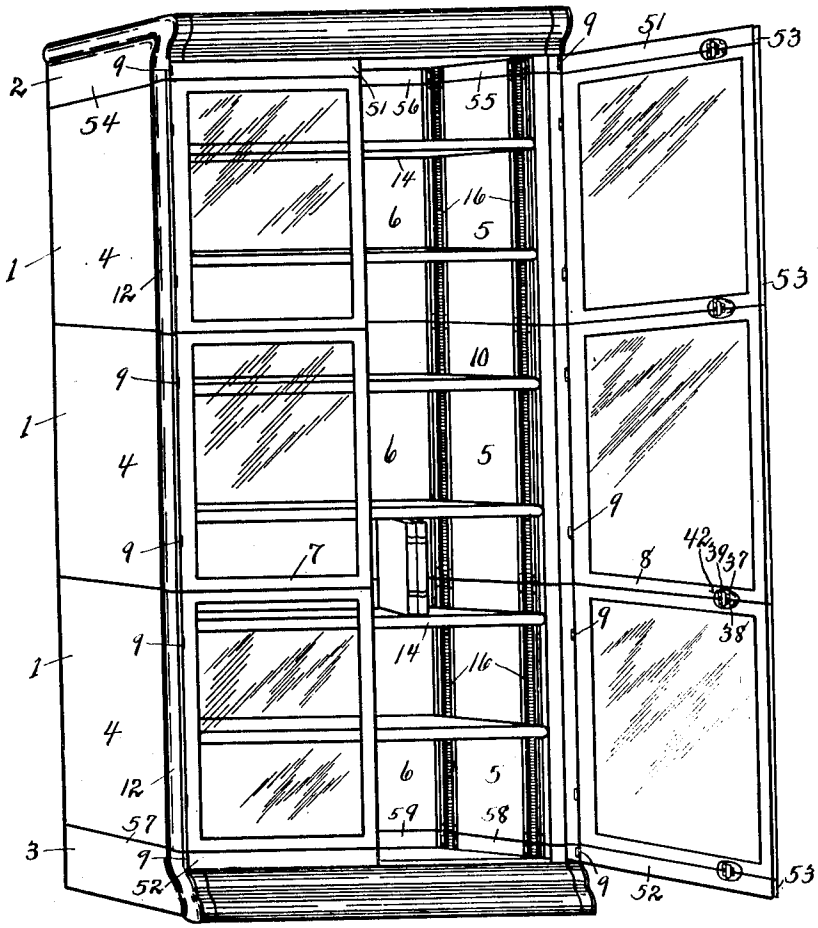


Fig. 6.

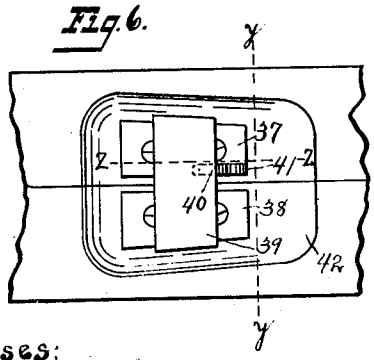


Fig. 8.

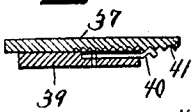
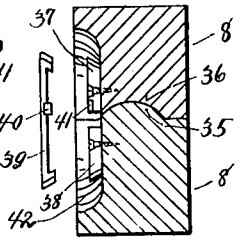


Fig. 7.



Witnesses:
Herbert F. Hartley
J. D. Rowe

Inventor:
Edward G. Schriefer,
by A. F. Hershfield, His Attorney.

No. 892,187. PATENTED JUNE 30, 1908.

E. G. SCHRIEFER.

EXTENSIBLE CASE.

APPLICATION FILED FEB. 3, 1902.

2 SHEETS—SHEET 2.

Fig. 2.

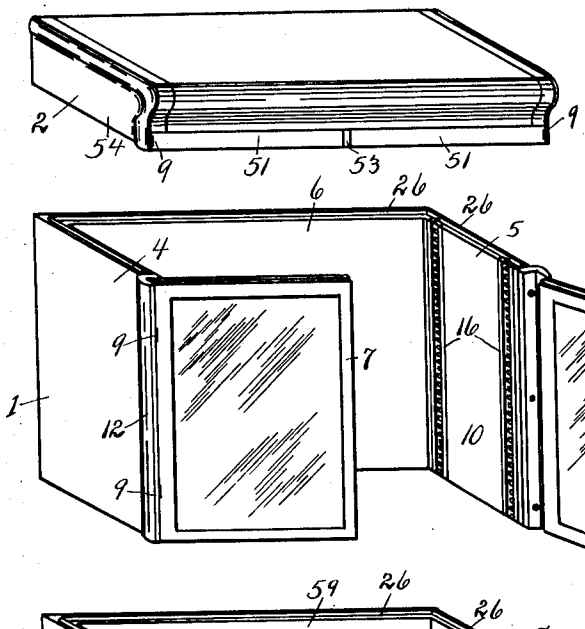
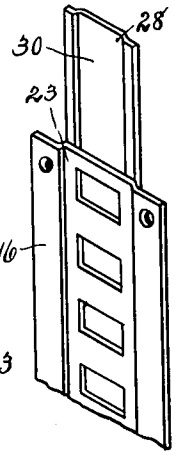


Fig. 5.



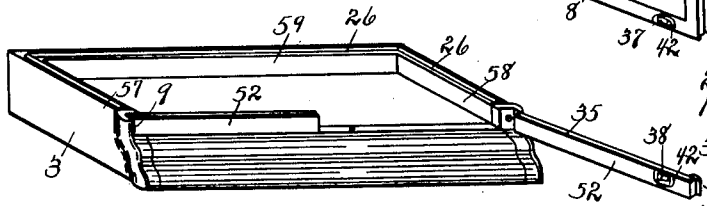


Fig. 4.

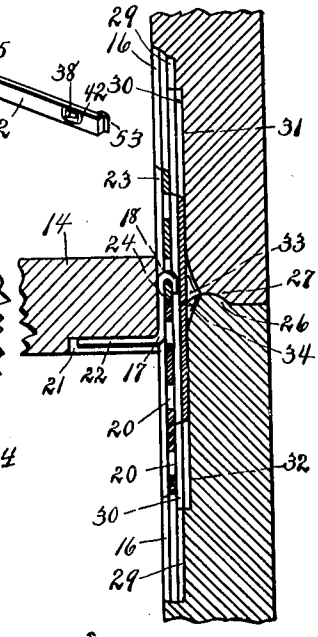
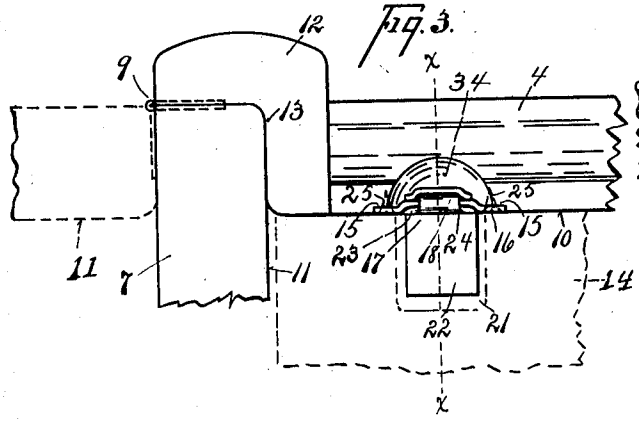


Fig. 3.



Witnesses:

Herbert F. Hasdell

J. S. Thomas

Inventor:

Edward G. Schriefer

by D. S. Herbst Atty Attorney

UNITED STATES PATENT OFFICE.

EDWARD G. SCHRIEFER, OF CINCINNATI, OHIO.

EXTENSIBLE CASE.

No. 892,187. Specification of Letters Patent. Patented June 30, 1908.

Application filed February 3, 1902. Serial No. 92,461.

To all whom it may concern:

Be it known that I, EDWARD G. SCHRIEFER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Extensible Cases, of which the following is a specification.

It is the object of my invention to provide an extensible case comprising a case-section or sections having a back and sides but without top or bottom, a top unit and a bottom unit, for forming a case in which a shelf or shelves may be passed up and down and secured at desirable points for forming a compartment either within a case-section or overlapping case-sections, with a door or doors swinging in upright position, and my invention consists in providing a case-section of the character described with a door swinging in upright positions; further, in providing means for connecting the several doors of the several sections or units for forming a united door; further, in providing a top unit, or a bottom unit, or both, for a case of the character described, with a swinging leaf or door; further, in providing means for connecting said door or leaf with the united door of the case-section or sections, further, in novel means for hanging the shelves for affording full inside clearance for the case and compartments in the case; further, in novel means for hanging the doors for affording full clearance at the front to the inside of the case; and further, in the parts and in the construction, arrangement and combinations of parts hereinafter more fully described and claimed.

I do not independently herein claim the adjustable shelf support herein shown and described, having filed applications on said subject-matters, being Serial Nos. 105388 and 105389 filed April 30, 1902, to which reference is respectfully made. I have also, in another application, Serial No. 92460, shown described and claimed the case-section or unit comprising a back and sides without top or bottom, to which application reference is respectfully made, and have also shown, described and claimed such case-section in connection with other matter in other applications filed by me February 3, 1902, Serial Nos. 92462 and 92463, to which reference is also respectfully made.

In the drawings: Figure 1 represents a perspective view of my improved device. Fig. 2 is a similar view, showing a case section, the top unit, and the bottom unit in separated relation. Fig. 3 is a plan view of a detail, showing the shelf support, means for mounting the door, and the connecting means between sections. Fig. 4 is a detail in vertical section, taken on a line corresponding to the line x—x of Fig. 3, showing the shelf support and means for holding the sides of case-sections against sidewise displacement. Fig. 5 is a detail in perspective of the connecting means between sections. Fig. 6 is a detail in side elevation showing the connecting means between doors. Fig. 7 is a cross-section of the same in separated relation taken on the line y—y of Fig. 6; and, Fig. 8 is a detail in cross-section taken on the line z—z of Fig. 6 showing the retaining means for the same.

1 represents a case-section; 2 a top unit, and 3 a bottom unit. The case-section consists of two sides 4 5, and a back 6, all preferably close, and connected by suitable means. The doors 7 8 are supported on the case-section and swing in vertical position on hinges 9. The hinges are preferably located to the outside of the inner face 10 of the side of the case-section for a distance corresponding to the thickness of the door frame between said inner face and pivot of the hinge, so that when the door is swung open at right angles to the case its inner face 11 will be in substantially the vertical plane of extension of the inner face 10 of the case-section for giving the inside of the case-section full clearance at its front for removal of articles therein. For accomplishing this object conveniently, I provide the front of the sides of the sections with posts 12, having rabbets 13 for receiving the outer edge of the door.

In order to further provide clearance on the inside of the case-section for articles, I also provide the sides with recesses 15 in which I secure vertical shelf-strips 16.

17 represents a shelf support, provided at its upper end with a hook 18 for taking into apertures 20 in the shelf-strips 16. The shelves 14 or similar article supporting device may be recessed, as shown at 21 for admitting the ledge 22 of the shelf support. The shelf-strips may also be channeled, as shown at 23, for strength and for receiving the shank 24 of the shelf support. Screws 25 secure the shelf-strips to the section-sides. One of the shelf supports may be provided for each corner of the shelf for supporting the shelf in horizontal position at desirable height. The

shelf-strips and supports are preferably of metal. By means of this improved construction full clearance is given the inside of the case, and full clearance is also given compartments between shelves, the shelf-strips and supports being located within the planes of extension of the shelves and vertical walls of the case-sections.

I have shown the upper edge of the case-section provided with a tongue 26, its lower edge having a groove 27, or vice versa, for aiding in seating the cases upon each other, making close joints for arresting the passage of dust, and preventing relative movement of the parts. In order to insure additional rigidity, I prefer to employ a connecting piece 30, which I have shown of channel form, the same being adapted to be received in grooves 31 32 respectively in the lower and upper ends of the sides of the sections. I prefer to place these connecting pieces between the shelf-strips and the sides of the case, thereby removing them from view when the case is set up. For readily "finding" the connecting pieces when placing a unit, I provide the grooves 31 32 with flaring openings 33 34. One of the pieces 30 is preferably placed at the front at each side of the case lapping two units placed one above another. The object of the connecting pieces is to hold the sides of the case-sections against sidewise displacement or bulging. The channel 28 in the connecting piece is for the purpose of strength and to receive the hook 18 when inserted into openings opposite the connecting-piece. The sides of the case-section are also provided with grooves 29 to rear of the shelf-strips for receiving said hooks, the channels 28 being practically a continuation of the grooves 29.

If case-sections are placed one upon another, I prefer to connect the doors of the several sections for forming a united door. The doors may also be provided with tongues 35 and grooves 36 similar to the case-sections. As means for connecting the doors, I have shown wedge pieces 37 38 connected respectively to the respective doors to be connected, with a wedge-clamp 39 adapted to take about the two wedge pieces and to be forced upon the same for firmly uniting the doors, a spring 40 being adapted to take against ridges 41 for preventing displacement of the clamp. The wedges and wedge-pieces may be sunk into depressions 42. Any suitable number of doors may be thus connected for forming a united door. It is of course obvious that other means for connecting may be employed.

If the doors are provided with tongue and groove, as stated, it is advisable to provide a door or leaf 51 for the top unit adapted to be connected with the door of the section immediately below, as by means similar to the means employed for connecting the doors of sections. The leaf 51 may be hinged to the top unit by a hinge 9. The bottom unit may also be provided with a door or leaf 52 connected to the bottom unit by a hinge 9 and to the door of the section immediately above by a connection similar to the connection for connecting the doors between sections. In the form shown, the lower edge of the leaf or strip 51 will be provided with a groove for receiving the tongue of the door immediately below and the upper edge of the leaf or strip 52 would be provided with a tongue for taking into the groove of the door of the section above, and the upper edge of the leaf 51 and lower edge of the leaf 52 would be square with the sides of the leaves for forming a complete finish when the case is closed. A dust strip 53 may be provided for each of the doors and leaves at one side of the case for overlapping the doors and leaves at the other side of the case.

The top unit may have depending sides 54 55 and a depending back 56 corresponding to the height of the leaves 51, and the bottom unit may have upwardly extending sides 57 58 and an upwardly extending back 59 corresponding to the height of the leaves 52.

I claim:

1. In an extensible case system, the combination of case-sections, each constructed as a unit and comprising a back and sides and being open at top and bottom and a door-section of substantially the height of said case-section hinged to said case-section and swinging in upright position, a shelf arranged to be passed up and down entirely through said case-section, and adjustable shelf-supporting means supporting the shelf in said case-section at various heights, said door-section having at top and bottom thereof means for connecting superposed door-sections when said case-sections are arranged one on top of the other, thereby forming a unitary door throughout the height of all of said case-sections, each of said case-sections with its door, shelf and means adjustably supporting the shelf constructed and arranged to be moved as an entirety and interchanged at various points in height in the combined case.

2. In an extensible case, the combination of case-sections, each comprising a back and sides having open ended top and bottom with a door-section for each case-section of substantially the height of said case-section hinged thereto on a substantially vertical axis, a shelf, means within said case-sections for adjustably supporting said shelf, and means at top and bottom of the respective door-sections connecting the door-sections for forming a united door of substantially the combined height of said case-sections, said case-sections with their door-sections and connecting means at top and bottom of said door-sections arranged for interchangeabil-

ity to various elevations in a combined case, with said connecting means on superposed door-sections mating for connection irrespective of elevation of the several case-sections.

3. In an extensible case, the combination of a case-section comprising a back and sides and being open-ended at top and bottom a door for the case-section swinging on a substantially vertical axis, a top unit, a leaf for the top unit in the horizontal plane of the top unit, and means for connecting the door of a section and the leaf for forming a united door swinging on a substantially vertical axis.

4. In an extensible case, the combination of a case-section, comprising a back and sides and being open-ended at top and bottom, with a door swinging on a substantially vertical axis, a bottom unit, a leaf for the bottom unit in the horizontal plane of the bottom unit, and means for connecting the door of a section with the leaf for forming a united door swinging on a substantially vertical axis.

5. In an extensible case, the combination of a case-section comprising a back and sides and having open top and bottom, with a door for the section swinging on a substantially vertical axis, a top unit, a leaf therefor in the horizontal plane thereof, a bottom unit, a leaf therefor in the horizontal plane thereof, and means for connecting a door of a section with the leaf for the top unit and means for connecting the door of a section with the leaf for the bottom unit for forming a united door swinging on a substantially vertical axis.

6. In an extensible case, the combination with a top-section and a base-section, of case-sections each constructed as a unit and comprising a back and two sides and being open at top and bottom, a door-section for each case-section of substantially the height of said case-section swinging on a substantially vertical axis thereon, connecting means at top and bottom of the respective door-sections, said case-sections with their several door-sections and connecting means for the latter arranged to be placed interchangeably one on top of another between the top-section and base-section for forming a case having an interior constructed and arranged for permitting a shelf to be passed up and down throughout said interior, said connecting means between door-sections arranged for connecting superposed doors irrespective of relative superposed relation of the several door-sections for forming a unitary door, with means in the several case-sections for supporting and permitting adjustment of a shelf to various heights in said several case sections, and a shelf supported by the latter means.

7. In an extensible case system, the combination, with a top unit and a bottom unit, of case-sections, said case-sections open at top and bottom, a door-section of substantially the height of the case-section hinged to each case-section and swinging in upright position, said case-sections with their respective door-sections hinged thereon arranged to be interchangeably placed as units one above the other between said top unit and said bottom unit for forming a case having continuous interior throughout which a shelf may be passed up and down, means connecting superposed door-sections operating at various interchanged elevations of said case-sections for forming a unitary door giving continuous access throughout the height of said continuous interior by the swinging of said unitary door as an entirety, each of said door-sections forming a complete door when only the one case-section to which it is hinged is placed between the top unit and bottom unit for forming a case, and, in connection with other door-sections of other case-sections, forming said unitary door when more case-sections are placed between the top unit and bottom unit for forming a case.

8. In an extensible case system, the combination with a top unit and a bottom unit, of case-sections each comprising a back and sides and being open at top and bottom, a pair of door-sections hinged to each case-section and swinging in upright positions, said door-sections being substantially the height of said case-section, said case-section with its door-sections constructed as a unit, forming a case-unit, said case-units arranged to be interchangeably placed at various elevations between said top unit and said bottom-unit for forming a case with continuous interior throughout which a shelf may be passed, a shelf, means within the case-units for adjustably supporting said shelf, and connecting means between door-sections arranged in similar vertical plane connecting said door-sections in various selective elevations at which said case-units are placed between said top unit and bottom unit.

9. In an extensible case, the combination of case-sections each comprising a back and sides but having open top and bottom, shelf-strips extending up and down through each case-section, a shelf, means connected with said shelf-strips for supporting said shelf, and a connecting piece between the shelf-strips and the side of the sections lapping said sides for holding said sides against sidewise displacement or bulging.

10. In an extensible case, the combination of case sections each comprising a back and sides, having open top and bottom, and formed with grooves extending up and down in said sections, shelf-strips located in said grooves, a shelf, means connected with said shelf-strips for supporting said shelf, and

said sides having recesses in rear of said shelf-strips, with a connecting-piece for taking into said recesses lapping the sides of sections for holding said sides against sidewise displacement or bulging.

11. In an extensible case, the combination of a case-section comprising a back and sides and being open-ended at top and bottom, and a door of substantially the height of said case section pivoted to a side and swinging in vertical positions, with the pivot for the door located in a vertical plane situate outside the vertical plane of extension of the inside wall of said side of the case-section a distance corresponding substantially to the thickness of the door-frame between said pivot and inside wall, for affording front clearance for the case-section.

12. In an extensible case, the combination of case sections each comprising a back and sides but being open ended at top and bottom, a door hinged to each section and swinging in substantially vertical positions with the pivot for the doors located in a vertical plane outside of the vertical plane of extension of the inside wall of the side of the case section a distance corresponding substantially to the thickness of the door-frame between said pivot and inside wall, with means for uniting said doors for forming a united door swinging in substantially the same vertical positions.

13. In an extensible case, the combination of a case-section comprising a back and sides and having open-ended top and bottom, a top unit and a bottom unit, with shelf-strip sections countersunk into the sides of the case-section and having openings therein, a shelf having recesses, shelf-supports taking into the openings and into said recesses, forming a case with unobstructed interior and having supporting means for the shelf located substantially within the planes of extension of the sides of the case-sections and permitting the shelf to be placed at desirable points up and down throughout the case.

14. In an extensible case, the combination with a top unit and a bottom unit, of case-sections, a pair of door-sections hinged to each case-section and being of substantially the height of the case-section to which it is hinged, said door-sections swinging in upright positions, connecting means at top and bottom of said several door-sections, said case-sections with the door-sections thereon in normal position of use arranged to be placed as an entirety one above another at various elevations in said extensible case with said door-sections placed one above another taking one against the other and with said connecting means between door-sections mating interchangeably at various elevations of said case-sections.

15. In an extensible case, the combination with a top unit and a bottom unit, of case-sections, a door-section swinging in upright positions hinged to each case-section and of substantially the height of said case-section, connecting means between door-sections respectively at top and bottom of said door-sections, said case-sections with their door-sections and connecting means for the latter constructed as units and arranged to be moved and interchanged at various points in height in the case with said door-sections placed one above another taking one against the other and with said connecting means between said door-sections registering with each other in their several interchanged positions for securing the door-sections together as a unitary door.

16. In an extensible case system, the combination with a top unit and a bottom unit, of case-sections having sides, a pair of door-sections of substantially the height of their case-section hinged to each case-section and swinging in upright positions, said case-section with its door-sections constructed as a unit, forming a case-unit, said case-units arranged to be interchangeably placed at various elevations one above another between said top unit and said bottom unit, said pairs of door-sections when said case-units are so placed taking one upon another, and connecting means between superposed door-sections arranged in similar vertical plane connecting said door-sections in various selective elevations at which said case-units are placed between said top unit and said bottom unit, the pivots of the hinges of said door-sections being located in vertical plane outside the respective vertical planes of extension of the inside walls of said respective sides of said case-sections a distance corresponding substantially to the thickness of the door-frame between said respective pivots and inside walls for affording front clearance for the case-sections.

17. In an extensible case system, the combination with a top unit and a bottom unit, of case-sections having sides, a door-section hinged to each case-section and swinging in upright positions, said door-section being substantially the height of the case-section to which it is hinged, said several case-sections with their respective door-sections arranged to be interchangeably placed at various elevations one above another between said top unit and said bottom unit for forming a case, and connecting means between door-sections arranged in similar vertical plane connecting said door-sections in various selective elevations at which said case-sections are placed between said top unit and said bottom unit, the pivots of the hinges of said door-sections being located in a vertical plane situate outside the vertical plane of extension of the inside wall of said sides of said case-sections a distance cor-

responding substantially to the thickness of the door-frame between said pivots and inside walls for affording front clearance for the case-sections.

18. In an extensible case system, the combination with a top unit and a bottom unit, of case-sections having sides, a door-section hinged to each case-section and swinging in upright positions on pivots located in a plane outside the vertical plane of the inside wall of said sides, said door-section being substantially the height of the case-section to which it is hinged, said several case-sections with their respective door-sections arranged to be interchangeably placed at various elevations one above another between said top unit and said bottom unit for forming a case, and connecting means between door-sections arranged in similar vertical plane connecting said door-sections in various selective elevations at which said case-sections are placed between said top unit and said bottom unit, each of said door-sections forming a complete door when only the case-section to which it is hinged is placed between the top unit and bottom unit for forming a case, and, in connection with other door-sections of other case-sections, forming a united door when more case-sections are placed between the top unit and bottom unit for forming a case.

In witness whereof I have signed my name hereto in the presence of two subscribing witnesses.

EDWARD G. SCHRIEFER.

Witnesses:

ERNEST G. SIMON,

HERBERT F. HARDEN.