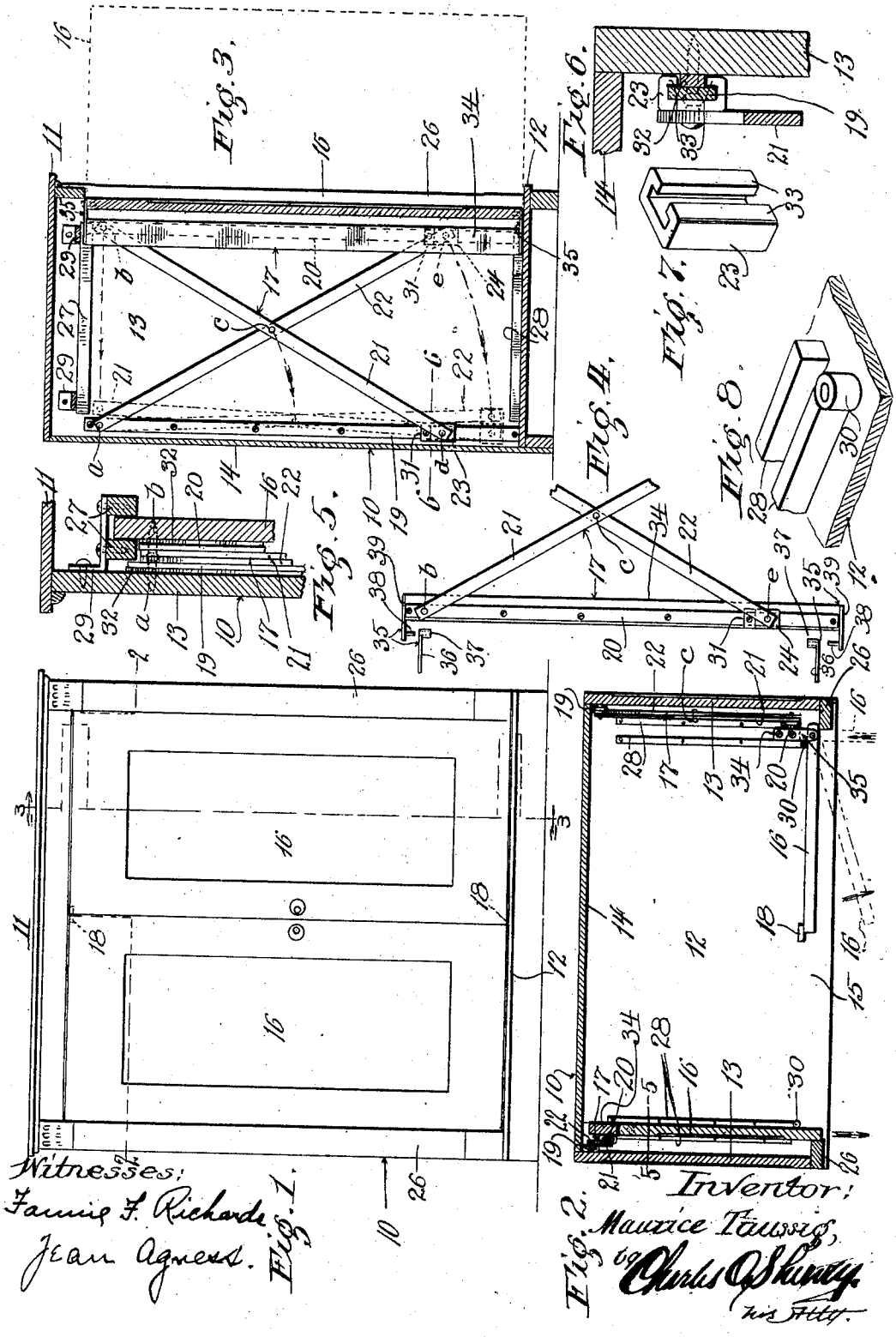
M. TAUSSIG.

DISAPPEARING DOOR.

APPLICATION FILED AUG. 4, 1909.

972,412.

Patented Oct. 11, 1910.



Witnesses:
Fannie F. Richards
Jean Agnews.

Inventor:
Maurice Taussig,
by Charles A. Shurtz.
his Atty.

UNITED STATES PATENT OFFICE.

MAURICE TAUSSIG, OF CHICAGO, ILLINOIS.

DISAPPEARING DOOR.

972,412. Specification of Letters Patent. **Patented Oct. 11, 1910.**

Application filed August 4, 1909. Serial No. 511,110.

To all whom it may concern:

Be it known that I, MAURICE TAUSSIG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Disappearing Doors, of which the following is a specification.

This invention relates to disappearing doors, and more particularly to disappearing doors of that class which may be swung into open position, and then be pushed back into the cabinet or case upon which they are hung.

The object of this invention is to simplify, cheapen and otherwise improve upon doors of this class and to such ends this invention consists in certain novel features of construction and arrangement, a description of which will be found in the following specification, and the essential features of which will be more particularly set forth in the appended claims.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a cabinet or case upon which are hung two disappearing doors containing my improvements, Fig. 2 is a horizontal section taken on the line 2—2 Fig. 1, but showing one of the doors opened, Fig. 3 is a vertical cross section taken on the line 3—3 Fig. 1, Fig. 4 is a side view of a portion of the collapsible door carrying frame looking in a direction opposite that in which it is seen in Fig. 3, Fig. 5 is a detail vertical section taken on the line 5—5 Fig. 2, Fig. 6 is a detail horizontal section taken on the line 6—6 Fig. 3, Fig. 7 is a perspective view of a slide block and Fig. 8 is a perspective view of a guide for the door carrying frame and door.

In these drawings, which illustrate the embodiment of one form of the invention, 10, represents a cabinet, case, shelving or the like, of which 11, is the top, 12, the bottom, 13, the sides and 14, the back. The cabinet may assume any well known form having one or more openings or doorways 15, therein, which are to be closed by the doors. The doors proper are illustrated at 16, and are hinged upon collapsible frames 17, which are slidably mounted on the cabinet and arranged to collapse or condense in width from front to back of the cabinet. The doors are free to swing upon said frames 17, from their closed to a position at right angles to such position and stops 18, may be provided if desired to limit the inward swing of the doors.

The collapsible frames are shown as supported upon the end walls of the cabinet, one element of the frames being rigidly connected thereto and the others being hung upon or receiving their means of support therefrom. The preferred form of frame comprises in general two guide bars 19, 20, and two bars 21, 22, one of which is pivoted to the stationary bar 19, at *a*, and the other of which is pivoted to the movable bar 20, at *b*. The bars 21, 22, cross each other midway between their ends and are pivoted together at the crossing point *c*, and the ends of the bars 21, 22, opposite the pivoted ends *a*, *b*, are pivotally and slidably connected with the bars 19, 20, as for instance by means of slide blocks 23, 24, that are guided to slide upon the bars 19, 20. The pivots *a*, *b*, of the bars 21, 22, are arranged in a line parallel with the plane through which it is desired to move the door when disappearing into or being withdrawn from the cabinet. The pivotal connections between the bars 21, 22, and between the bars and guiding means, gives the pivots *a*, *b*, *d*, *e*, a parallel motion whenever the frame 17, is either collapsed or expanded, the result being that the bar 20, is maintained in positions parallel with the bar 19.

In the form shown in the drawings the bar 20, is secured to a bar 34, which is guided laterally in guideways formed between strips 27, 28, secured to the top and bottom of the cabinet. Said strips extend from front to back of the cabinet and guide the door carrying frame and door against lateral play when moving across the cabinet. The top strips 27, are preferably secured in place by brackets 29, (see Fig. 5) and the bottom strips are secured directly to the bottom of the cabinet. If desired, rollers 30, may be provided at the front of the inner strips 28, to act as stops for the pivoted ends of the doors. Said rollers prevent the doors from being pushed inward when the doors are in closed position, and the pilasters 26, of the cabinet prevent the pivoted ends of the doors from being pulled outward beyond the position occupied when closed. If desired blocks 31, may be provided upon the bars 19, 20, to

act as stops for limiting the movement of the guide blocks 23, 24, in the direction which they take when the door is being drawn from its retracted to its exposed position.

The exact manner of connecting the bars 19, 20, with the cabinet and door, respectively, is immaterial. In the form shown, a door carrying bar 34, is provided which is parallel with the bars 19, 20, and is guided to slide horizontally in the guideways between the strips 27, 28. Strips or blocks 32, may be interposed between the bar 19, and the supporting wall 13, and between the bar 20, and door carrying bar 34. These strips or blocks 32, hold the bars 19, 20, away from the object to which they are secured, and the slide blocks have overhanging edges 33, that grasp the bars so as to slidably connect the slide blocks with the bars 19, 20.

The doors 16, are shown as pivoted to the door carrying bar 34, by means of hinges 35, the leaves 36, of which are secured to the upper and lower edges of the doors, and contain perforated ears 37, to receive the pintle pins 38, of the opposite leaves 39. This form of hinge is of course immaterial to my invention, broadly speaking, as the ordinary flat two leaf hinge such as is commonly used upon swinging doors, may be employed in place thereof, if desired.

In operation the doors may be swung from closed to open position, or vice versa, in the ordinary manner. Whenever it is desired to maintain a door in open position and out of the way, the door is swung into open position and then pushed back into the guides. Being carried by the collapsible frame, the door may be pushed back or drawn forward without much energy, as there is no friction caused by the door sliding upon the bottom.

I am aware that various alterations and modifications of the details of construction are possible without departing from the spirit of my invention, and I do not therefore desire to limit myself to the exact form of construction and arrangement shown and described in this specification.

I claim as new and desire to secure by Letters Patent:

1. In disappearing doors of the class described, the combination with a support, of a laterally collapsible door carrying frame having an upright door carrying bar of substantially the same height as the door to be carried thereby and a door hinged to said door carrying bar on broadly spaced hinges.

2. In disappearing doors of the class described, the combination with a support, of an upright door carrying bar of substantially the same height as the door to be carried thereby, a guide therefor, two bars crossing each other and pivotally connected together at the crossing point, one end of the bars being pivotally connected to the door carrying bar and support, respectively, and the other ends of the bars being slidably connected to the support and door carrying bar, respectively, and a door hinged on the door carrying bar on broadly spaced hinges.

3. In disappearing doors of the class described, the combination with a support, of an upright door carrying bar of substantially the same height as the door to be carried thereby, a guide therefor, two bars pivotally connected with each midway between their ends, pivotal connections between the ends of the bars and the support and door carrying bar, respectively, the lower pivot connections being slidable upon the support and door carrying bar, respectively, and an upright swinging door hinged to the door carrying bar on broadly spaced hinges.

4. In a disappearing door of the class described, the combination with a stationary vertical guide bar, of a collapsible frame secured thereto and comprising a door carrying bar of substantially the same height as the door carried thereby arranged parallel with the guide bar, and guided in its movement to and from the guide bar, a pair of bars which are pivotally connected together midway between their ends, pivotal connections between the ends of said pair of bars and the guide bar and door carrying bar, respectively, the lower pivots having sliding connections with the guide bar and door carrying bar respectively, and an upright swinging door hinged to said door carrying bar on broadly spaced hinges.

5. In a disappearing door of the class described, the combination with a support, of a vertical guide bar secured thereto, a collapsible frame carried by the support and guide bar, and comprising a vertical door carrying bar of substantially the same height as the door carried thereby, a pair of bars pivoted to each other midway between their ends, a pivotal connection between one of said bars and the support, a pivotal connection between the other bar and the door carrying bar, arranged in horizontal alinement with the first named pivot, pivots upon the other ends of the bars slidably connected with the guide bar and door carrying bar respectively, a guide in which said collapsible frame slides, and an upright swinging door hinged to the door carrying bar on broadly spaced hinges.

6. In a disappearing door of the class described, the combination with a vertical support, of a guide bar secured thereto, a collapsible frame carried by the support and guide bar and having an upright door carrying bar of substantially the same height as the door to be carried thereby, stops for limiting the expansion of the collapsible frame, an upright swinging door hinged to the door carrying bar on broadly spaced

hinges, and a guideway for the frame and door.

7. In a disappearing door of the class described, the combination with a support, a collapsible frame secured thereto and having an upright door carrying bar of substantially the same height as the door to be carried thereby, a guideway for said frame, an upright swinging door hinged to the door carrying bar on broadly-spaced hinges, and a roller at the front end of the guideway about which the door is swung into open or closed position.

In witness whereof I have hereunto subscribed my name to the foregoing specification, at Chicago, Cook county, Illinois, this 27th day of July 1909.

MAURICE TAUSSIG.

Witnesses:
E. W. P. FLESCH,
E. J. MASSMAN.