F. N. WEIS & C. F. HEHLE.

DOOR GUIDE FOR SECTIONAL BOOKCASES.

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928,566.

Patented July 20, 1909.

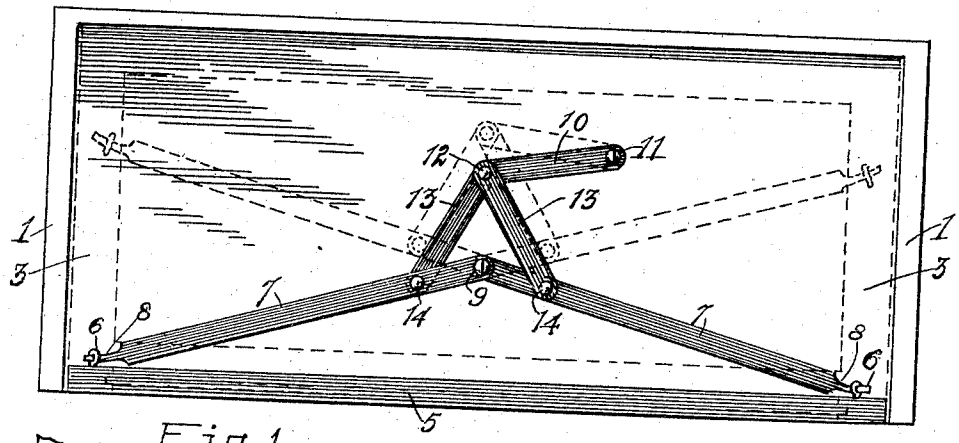


Fig. 1.

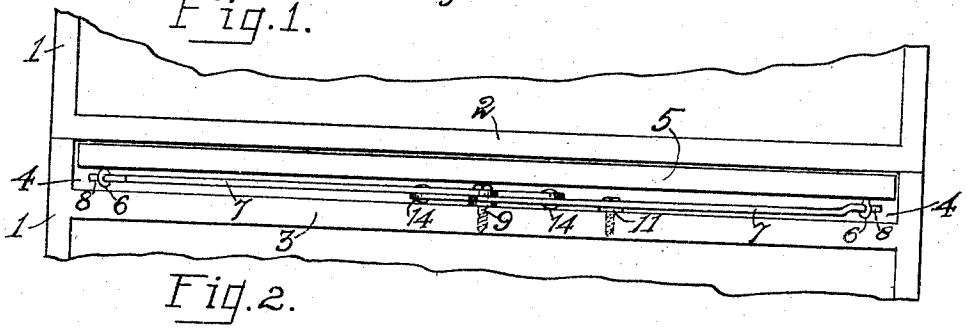


Fig. 2.

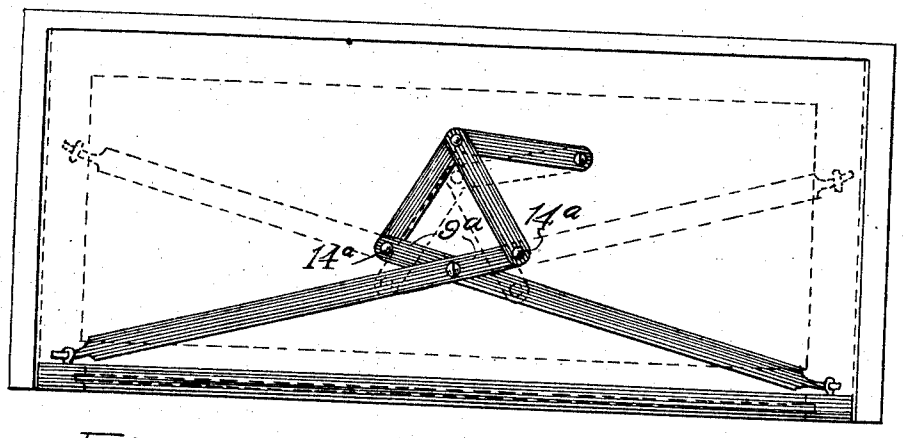


Fig. 3.

WITNESSES:

D. C. Walter

Ada Law Cameron

INVENTORS:

Frank N. Weis and

Charles F. Hehle,

by Munson Hall their Atty

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK N. WEIS AND CHARLES F. HEHLE, OF MONROE, MICHIGAN, ASSIGNORS TO THE WEIS MANUFACTURING COMPANY, OF MONROE, MICHIGAN, A CORPORATION OF MICHIGAN.

DOOR-GUIDE FOR SECTIONAL BOOKCASES.

No. 928,566. Specification of Letters Patent. Patented July 20, 1909.

Application filed December 7, 1908. Serial No. 466,250.

To all whom it may concern:

Be it known that we, FRANK N. WEIS and CHARLES F. HEHLE, citizens of the United States, residing at Monroe, in the county of Monroe and State of Michigan, have invented certain new and useful Improvements in Door-Guides for Sectional Bookcases; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

In the use of sectional bookcases having doors which swing upon their upper horizontal edge and which slip into a recess in the top of the case, a familiar difficulty encountered is that the doors when forced edgewise back into the recess bind and stick, causing a loss of time as well as annoyance.

Our invention relates to and its object is to provide means for overcoming the difficulties here indicated, and, more particularly, to furnish a novel and useful toggle which furnishes a pivot upon which the door may be swung from vertical to horizontal position, and vice-versa, and which furnishes a yielding guide which invariably causes the door to run true and smoothly and without binding. We attain these objects by means of the devices and arrangement of parts hereinafter described and shown, and illustrated in the accompanying drawing in which,—

Figure 1 is a top-plan view of a bookcase section provided with our device with the door hereinafter referred to in vertical closed position, the dotted lines indicating the position of the toggle hereinafter referred to when the door is raised and slipped back into its recess; Fig. 2, a front elevation of a portion of two bookcase-sections in assembled relation showing a front-edge view of our device with the door raised and slipped back into its recess, and Fig. 3, a top-plan view of a modified form of our toggle with the door of the bookcase in vertical closed position, the dotted lines representing the position of the toggle-bars hereinafter referred to, when the door is raised and slipped horizontally back into its recess.

Like parts are represented by corresponding characters throughout the drawings.

In the drawings, 1—1 are the ends, 2 the bottom, and 3 the top of a bookcase section. The top of the section is lower than the upper margin of the sides and ends so that when one section is set upon another there is a thin rectangular recess or pocket 4 between the top of one section and the bottom of the other.

5 is a door which fits into the front opening of the bookcase section, the top of the door being flush with the upper edge of the section.

6—6 are screw-eyes screwed into the back of the door near its upper margin and near its ends.

7—7 are two bars of equal length having reduced ends, as at 8, which are slipped into and which are adapted to slide lengthwise in the eyes 6. The opposite ends of these two bars are pivotally connected together and also to the top of the section, midway of its length and near its center, as at 9.

10 is a short bar pivoted at one end, to the top of the bookcase-section, as at 11, and at its other end pivotally connected, as at 12, to the meeting ends of the pair of divergent bars 13, the opposite ends of which are pivotally connected, as at 14, to the bars 7 at equi-distant intervals from the pivot 9.

When the bottom of the door is swung outwardly and upwardly the parts 6—8 form pivots or hinges upon which the door may be swung into horizontal position. Now the door may be slipped edgewise into the pocket or recess 4. During this operation the bars 7, which are of exactly the same radius, move at their extremities through exactly the same arc and at exactly the same speed, being held in constant relation to each other by their pivot 9 and the toggle 10—13—13. It will be seen, therefore, that the ends of the door must move horizontally exactly parallel with the ends of the bookcase-section, and that thus the door does not cramp or bind in its movement into and out of the pocket or recess 4. As will now be well understood without further explanation, when the door is raised and pressed into its recess the toggle 7—10—13 will have assumed the position indicated by the dotted lines in Fig. 1.

In Fig. 3 is illustrated a modification of our device which is exactly the same as that above described save that the meeting extremities of the bars 7 are extended beyond their pivotal point 9, as at 9^a, and that the bars 13 are connected to these projecting extremities, as at 14^a. The operation of this modification of our device is the same as above described, the position of the toggle, when the door is raised and slipped into its recess, being indicated by the dotted lines in Fig. 3.

Having described our invention, what we claim and desire to secure by Letters Patent is,—

1. In a device of the described character, a bookcase-section having a door adapted to swing outwardly and upwardly from its bottom, a pair of corresponding bars pivotally connected near one end to the top of the bookcase section and pivotally and slidably connected near their other ends with opposite ends of the door near its upper margin, a pair of corresponding bars pivotally connected at one end with the pair of bars first mentioned and at their other ends pivotally connected together, and another bar pivotally connected at one end to the top of the bookcase section and at its other end pivotally connected with the meeting ends of the second mentioned pair of bars.

2. In a device of the described character, a bookcase section, a door therefor adapted to swing outwardly and upwardly from its bottom,—there being a recess at the top of the section for the horizontal reception of the door,—eyes secured near the upper edge of the door and near its opposite ends, a short bar pivoted at one end to the top of the section, a pair of equal converging bars at their converging ends pivotally connected together and to the free end of the short bar, and another pair of equal bars pivotally connected together and to the top of the section and pivotally connected with the diverging ends of the other pair of bars and having reduced end-portions slidably and revolubly engaged with said eyes.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANK N. WEIS.
CHAS. F. HEHLE.

Witnesses:
HARRY C. WEIS.
HARRY C. WELS.