March 29, 1932. R. A. ALDEEN ET AL 1,851,747

HINGED SUPPORT

Filed Oct. 2, 1929

Fig. 1.

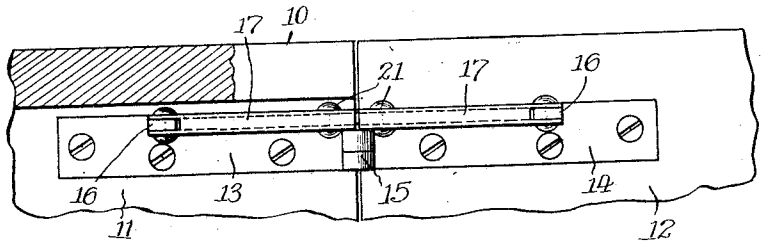


Fig. 2.

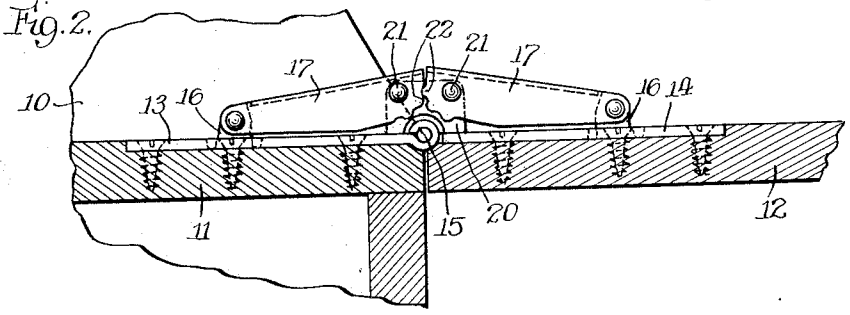


Fig. 3.

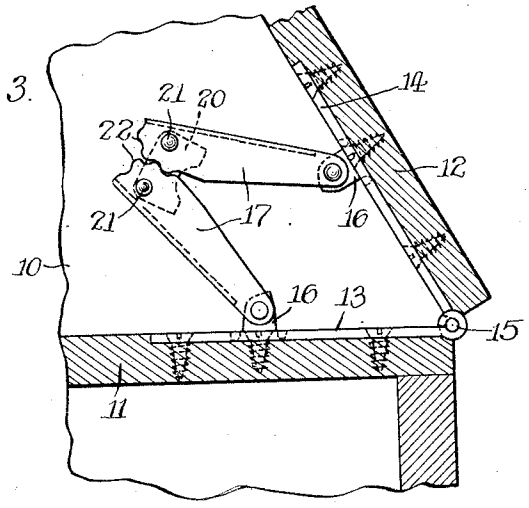


Fig. 4.

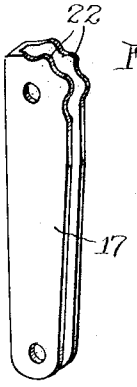
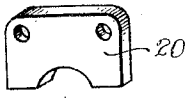


Fig. 5.



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UNITED STATES PATENT OFFICE

REUBEN A. ALDEEN AND THORSTEN H. ERICKSON, OF ROCKFORD, ILLINOIS, ASSIGNORS TO AMERICAN CABINET HARDWARE CORPORATION, OF ROCKFORD, ILLINOIS, A CORPORATION OF ILLINOIS

HINGED SUPPORT

Application filed October 2, 1929. Serial No. 396,649.

The invention relates generally to hinged supports for furniture and more particularly to a hinged support for the fall-board or closure member of a desk, cabinet, or the like, which is hinged about an axis lying along the upper front edge of the floor of the cabinet.

The general object of this invention is to provide a new and improved hinged support for the fall-board of a desk in which the fall-board pivots about an axis lying along the upper front edge of the floor of the desk, said hinged support being adapted to be mounted on the floor and fall-board and occupying only a minimum amount of space of the upper surface of the floor and fall-board which would otherwise be available for use in the functions of a desk.

Another object of the invention is to provide such a hinged support whose parts may be stamped from sheet metal and are comparatively small and simple in form so that the support is inexpensive to manufacture.

A further object is to provide a hinged support which includes two connected links having gear teeth on their adjacent ends for equalizing the movement of said links when opened or closed.

In pursuance of the above objects we aim to provide a hinged support for the fall-board of a desk comprising two members adapted to be mounted on the floor of the desk and the fall-board respectively and having their adjacent ends hinged together, two channel-shaped links, each having its outer end pivoted to one of said members and having gear teeth cut on its inner end, and a block mounted within the channels and pivoted to the inner ends of said links to hold said gear teeth in mesh, said block abutting said members when the fall-board has been lowered to a horizontal position.

Other objects and advantages of the invention will be understood from the following detailed description thereof taken in connection with the accompanying drawings, in which:

Figure 1 is a fragmental plan view of a desk with the fall-board open showing a hinged support embodying the preferred form of my invention.

Fig. 2 is a vertical section through the cabinet with the fall-board open showing the side elevation of the hinged support.

Fig. 3 is a section similar to that shown in Fig. 2 except that the fall-board is closed.

Fig. 4 is a perspective view of one of the links.

Fig. 5 is a perspective view of the block connecting the two links.

While the invention is susceptible of various modifications and alternative constructions, we have shown in the drawings and will herein describe in detail the preferred embodiment, but it is to be understood that we do not thereby intend to limit the invention to the specific form disclosed, but intend to cover all modifications and alternative constructions falling within the spirit and scope of the invention as expressed in the appended claims.

In the drawings, a desk is shown for which the hinged support is suitable. The desk comprises a side wall 10, a floor 11, and a closure member or fall-board 12 hinged about an axis lying along the upper front edge of the floor 11. While it is contemplated that two such hinged supports will be used for each fall-board, only one has been shown in the drawings as the other is exactly similar.

The hinged support illustrated herein comprises generally two members hinged together and adapted to be mounted on the floor 11 and fall-board 12 respectively, and a link structure forming a strut comprising two links pivotally attached to the floor and the fall-board by means of said members, means connecting the adjacent ends of said links, and means for equalizing their movement when the fall-board 12 is opened or closed.

In the present instance, a member 13, comprising a flat strip of metal, is adapted to be mounted in a mortise cut in the upper surface of the floor 11 and attached thereto as by screws. A second member 14 is adapted to be similarly mounted in a mortise cut in the fall-board 12 and alined with the member 13. The adjacent ends of said members are curled around a pin 15 to form a hinge. On the edge of each of said members and adjacent the

outer end thereof, a lug 16 is formed by bending a portion of the metal upwardly.

As mentioned above, the invention includes a link structure forming a strut comprising two links 17 pivotally attached to the floor 11 and the fall-board 12 by means of the members 13 and 14. The links 17 are formed in a channel shape, opening downwardly, and are pivotally attached at their outer ends to the lugs 16 with the flanges of the channel straddling the lug. Such construction gives greater strength and permits a lighter metal to be used.

Means are provided for connecting the adjacent ends of the links 17 comprising a third link or a block 20 mounted within the channels and pivotally connected at 21 to each of said links. The block 20 is notched in its lower edge to form two legs straddling the hinged portion of the members 13 and 14 and adapted to abut against the upper surfaces of the members when the fall-board is in a horizontal position.

To equalize the movement of the links 17 when the fall-board is opened or closed, the adjacent ends of the links 17 are held in rolling contact by gear teeth 22 formed on each flange of the channel and held in mesh by the block 20. The point of tangency of the pitch circles of the gear-teeth 22 on the two links 17 lies on the line joining the pivotal connections 21 between the block 20 and the links 17.

In opening the fall-board 12, the links 17 and the block 20 lie above the upper surfaces of the floor 11 and fall-board 12 and the block 20 abuts against the members 13 and 14 to limit the opening of the fall-board to a horizontal position.

It is apparent that we have provided a new and improved hinged support for the fall-board of a desk in which the fall-board pivots about an axis lying along the upper front edge of the floor of the desk. It is also apparent that the hinged support requires only a minimum amount of space and that its parts are such that it is simple and inexpensive to construct.

We claim as our invention:

1. A hinge comprising two hinge leaves each having a lug, two channel shaped links each having its outer end pivoted to one of said lugs, with the lugs embraced between the flanges of the links, and a block pivotally connecting the adjacent ends of the links, said block being embraced between the flanges of the links.

2. A hinge as in claim 1, the adjacent ends of the flanges of the links having inter engaging-teeth formed thereon.

In testimony whereof we have hereunto affixed our signatures.

REUBEN A. ALDEEN.
THORSTEN H. ERICKSON.