June 10, 1930. G. STINSON ET AL 1,762,489

HINGE FOR DESK LIDS AND THE LIKE

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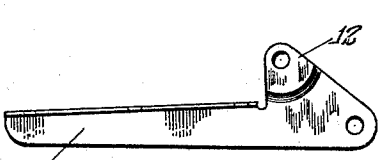

Fig. 5.

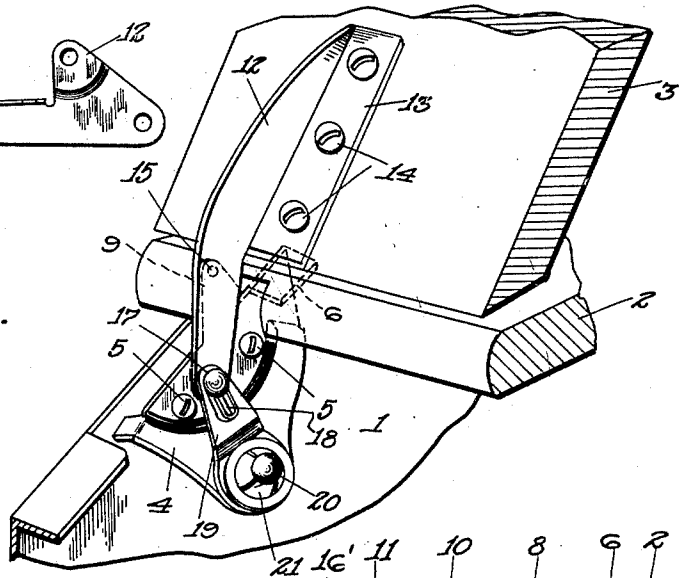

Fig. 1.

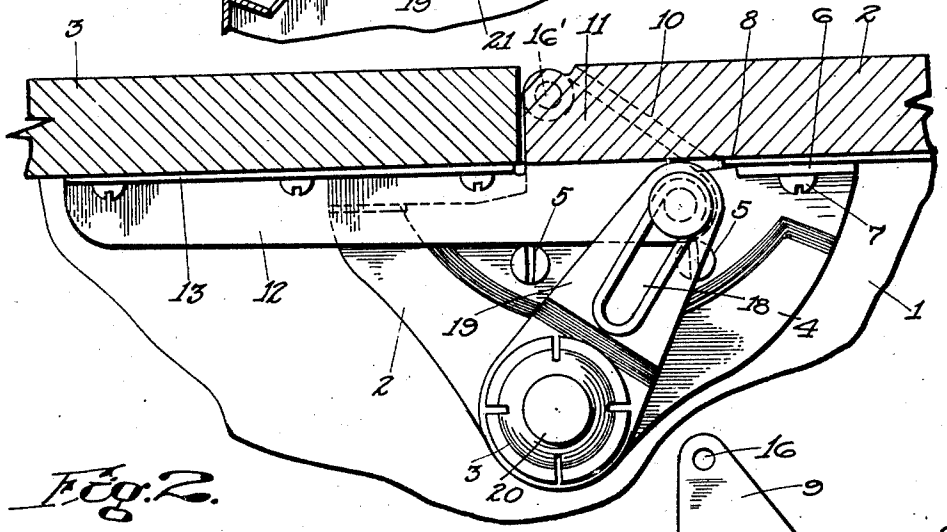

Fig. 2.

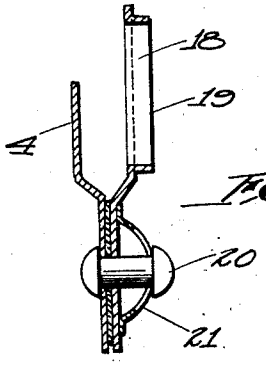

Fig. 3.

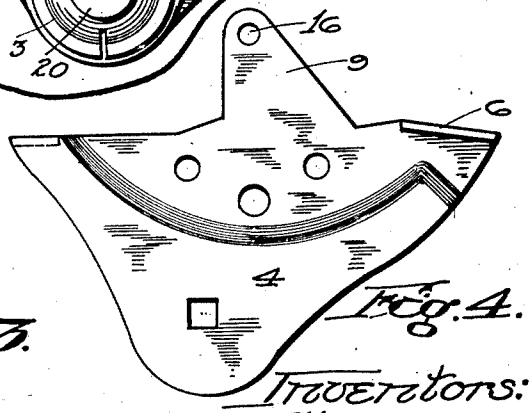

Fig. 4.

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UNITED STATES PATENT OFFICE

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HINGE FOR DESK LIDS AND THE LIKE

Application filed March 7, 1928. Serial No. 259,724.

The present invention relates to an improved form of hinge device for use with the lids of desks, and particularly school desks. The invention resides in a hinge construction of extreme simplicity that is readily attached to the body and lid of the desk, and that provides as an element thereof a member having a two-fold function, namely to stop or limit the opening movement of the lid, and to prevent the slamming of said lid in its closing movement. The above and other objects are attained by the hinge construction hereinafter described in detail, reference being had to the accompanying drawings, in which—

Fig. 1 is a perspective view of the hinge parts, with the desk lid in open position.

Fig. 2 is a section through the desk top and lid, showing the hinge in side elevation, with the desk lid in closed position.

Fig. 3 is a sectional view at right angles to the plane in which the section of Fig. 2 is taken.

Fig. 4 is a detached view of the stationary member of the hinge.

Fig. 5 is a detached view of the movable member of the hinge.

Like reference characters refer to like parts in the different figures.

In the drawings, only so much of the desk structure is shown as is necessary to illustrate the construction and operation of a single hinge device, but it will be understood that the desk is provided with two such devices, one associated with each of the desk sides or ends 1, 1. As is usual in desks of this class, the sides or ends 1, 1, of which one only is shown, have secured thereto a top board 2 which covers a part of the space inclosed by the sides, back, front and bottom of the desk. The closure of the remainder of this space is effected by a swinging lid 3 which, in the present instance, is hinged by the use of the duplicate hinge devices constituting the subject matter of the present invention.

The stationary member of our improved hinge device, as shown in Fig. 4, comprises a stamped or pressed metal plate of approximately triangular shape, designated as a whole by the numeral 4. A portion of this plate 4 is adapted to lie flat against the inner surface of desk side 1, which latter may be of wood, or as herein shown, of sheet metal construction; in either case, screws or rivets, or other suitable holding means 5, 5 are employed to attach the plate 4 rigidly to the desk side 1, and in addition, an inwardly directed lateral ear 6 is preferably provided on plate 4 in underlying realtion to the top board 2, so that a screw or other holding means 7 may be employed to tie the parts rigidly together, said screw 7, as here shown, passing through an inturned flange 8 of the desk side 1, on which flange the top board 2 finds support. In this way the stationary member 4 of the hinge is held firmly in place by being attached both to the desk side and to the top board,—a construction which measurably strengthens and reinforces the hinge.

The pivotal axis of the hinge, with reference to the stationary plate 4, is provided at or near the top with an upwardly extending projection 9 of said plate, which projection 9 is received within a narrow slot 10 formed in the edge of top board 2, as shown in Fig. 1. Lying adjacent the projection 9 in the slot 10 is a similarly shaped projection 11 of movable hinge member 12, the latter, as shown in Fig. 5, being a somewhat elongated plate or web of stamped or pressed metal, having a lateral inturned flange 13 by which it is secured, through screws or other suitable holding means 14, 14, to the under side of the desk lid 3. The projections 9 and 11, lying side by side in contact, are pivotally connected by a pin or rivet 15 which passes through suitable alined holes 16 and 16′, respectively, of said projections, and thus the lid 3 is hinged on a pivotal axis at or near the upper edge of the top board 2.

The web portion of movable hinge member 12, below the projection 11, is offset inwardly of said projection, so as to clear the screws or holding devices 5, 5 by which the stationary member 4 is secured to the desk side 1. Said offset web portion of member 12 has projecting from its inner surface, just beneath the projection 11, a headed pin 17, the shank of which is received in an elongated slot 18

of a rocker arm 19, the latter being pivotally mounted at its lower end on a stud or rivet 20 that projects inwardly from the lower corner of stationary hinge member 4. Interposed between the head of the stud or rivet 20 and the arm 19 is a compressed spring washer or disk 21, which acts to impose a retarding friction against swinging movement of the arm 19. Said arm is rocked back and forth by the opening and closing movement of lid 3, between the two extreme positions shown, respectively, by Figs. 1 and 2, and in the open position of said lid, the outer end of elongated slot 18 is engaged by the shank or pin 17 to prevent the lid 3 from being tipped back any further than shown as the perpendicular position. As the lid 3 is moved into closed position, the arm 19 is rocked in a clockwise direction, Figs. 1 and 2, but due to the friction imposed by the spring washer 21, it is impossible for the lid 3 to be slammed down against the desk sides 1, 1; this friction, in fact, is sufficient to hold the lid in any intermediate position, between the open position of Fig. 1 and the closed position of Fig. 2. In the swinging movement of arm 19, its upper end is accommodated in a recess or slot of top board 2, adjacent to and somewhat shallower than the slot 10.

We claim,

A hinge for a desk lid, to permit said lid to be raised into open position or lowered into a closed position in substantially the same plane as the stationary topboard of the desk, said hinge comprising a stationary element and a movable element, the two elements having adjacent portions pivotally connected on an axis contiguous to the edge of said topboard, and on which axis said lid is swung between its open and its closed positions, and a member pivotally attached at one end to said stationary element below said hinge axis and having at its other end an elongated slot to receive a pin carried by said movable element, said member adapted to swing on its pivot as said lid is raised and to serve as a limit stop for said opening movement by engagement of said pin with the end of said slot, the swinging movement of said member being frictionally retarded to prevent slamming of said lid on closure thereof.

Dated this 1st day of March, 1928.

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