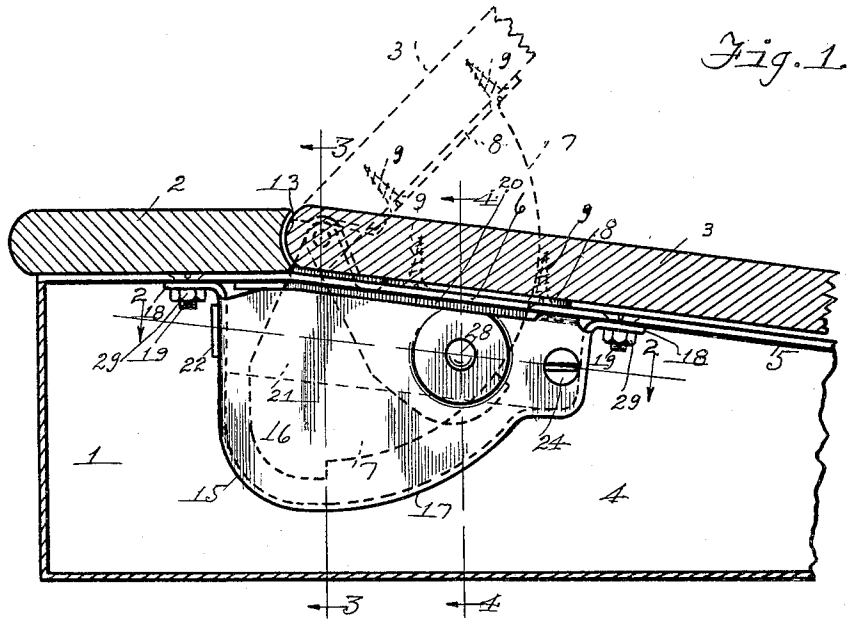
April 25, 1933. G. H. HAMILTON 1,905,858

HINGE HAVING FRICTION BEARINGS

Filed Feb. 14, 1931

Fig. 1.



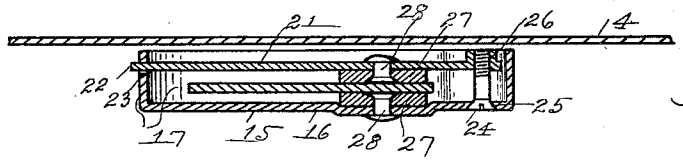


Fig. 2.

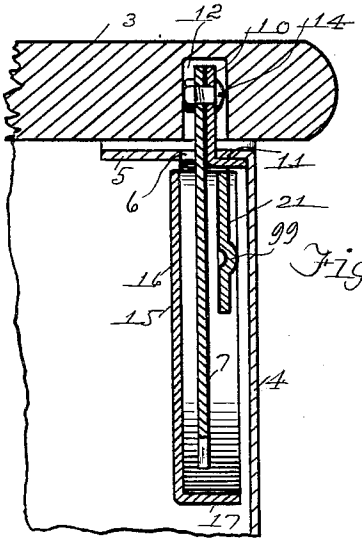


Fig. 3.

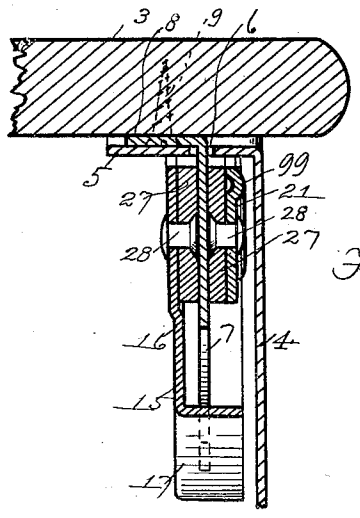


Fig. 4.

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Attorneys

Witness:

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Patented Apr. 25, 1933 1,905,858

UNITED STATES PATENT OFFICE

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HINGE HAVING FRICTION BEARINGS

Application filed February 14, 1931. Serial No. 515,699.

The present invention relates to hinges for desk top closures and the like and friction bearings therefor; and its object is, generally, to provide a device of this character improved in respects hereinafter appearing; and more particularly, to provide, in a desk top structure provided with a swingable closure having a friction segment, friction plates cooperating with said segment and having friction-adjusting means, contained in a casing mounted on said structure in such manner that said plates and means together with said casing may be removed from the desk top structure without affecting the hinge whereby the closure is mounted on said structure.

This, and any other and more specific objects hereinafter appearing are attained by, and the invention finds preferable embodiment in, the illustrative structure and mechanism particularly described in the body of this specification and illustrated by the accompanying drawing, in which:

Figure 1 is an inside end view of a desk top structure to which a device is applied for frictionally contacting a segment of the structure's swingably mounted cover shown in transverse vertical section;

Figure 2 is an approximately horizontally sectional view of parts thereof taken on line 2—2 of Figure 1;

Figure 3 is a vertical sectional view thereof taken on line 3—3 of Figure 1; and

Figure 4 is a vertical sectional view of the same taken on line 4—4 of Figure 1.

In the embodiment of the invention illustrated by the drawing, the upper part of a desk (such as is used in schools, etc.) is shown comprising a box top 1 and a cover therefor including a fixed part 2 and a closure part 3 swingable to open and shut positions. The box top 1 has a vertical side wall 4 (preferably made of sheet metal) with an inwardly turned horizontal flange 5 having a slot 6 therethrough. The hinge whereby the closure 3 is swingably mounted comprises a vertically disposed segmental member 7 whose horizontal flange 8 is mounted on the under side of the closure as by screws 9, and a member which is an upward extension of, and may be integral with, the end wall 4 of the box top or (as in the specific construction illustrated) may be of separate piece 10 united with said wall at 11 by spot welding or the like. The said hinge members, forming the leaves of the hinge, are of thin sheet metal.

Into a recess 12 in the cross sectionally curved inner edge 13 of the closure these members of the hinge extend, a pintle screw bolt 14 passing through one of them serving to connect said members together pivotally, thus forming a hinge concealed from view when the closure is shut.

A casing 15 having a vertical side wall 16 and a curved wall 17 is provided at its upper edge with forwardly and rearwardly extending ears or flanges 18 whereby the casing with the parts carried by and within it is detachably mounted on the under side of the box top's flange 5 as by screw bolts 19 passing therethrough.

The segmental member 7 descending through the open top 20 of said casing bears frictionally between vertically disposed friction plates, one of which may be (as shown) the inner side of the casing's wall 16, the other plate being a flat metal bar 21 one of whose ends 22 extends through and swingably bears in a slot 23 in the rear part of the casing's curved wall 17 to take care of varying thicknesses of wear members 27 hereinafter described. The bar 21 is provided with a strengthening rib 99 to provide rigidity and prevent resiliency of said bar. A screw 24 turnable in an opening 25 in the casing's wall 16 and threaded at 26 in the other friction plate 21 serves to adjust the frictional pressure of said plates on the segmental member 7 between them. The friction plates, as shown, carry wear members 27 secured thereto as by rivets 28 and bearing on the segmental member 7.

It will be seen that the casing 15, the wear plates with their relatively adjusting means therein may be detached from the box top by simply removing the bolts 19 or their nuts 29 and moving the casing downwardly, during which movement the friction plates slide vertically along the segmental member 7 and out of contact therewith, and that such removal may be thus made without discon-

necting the hinge members, pivotally connected within the recess 12 or in any way affecting their pivotal connection; and that the screws 9 may be removed to disconnect the closure 3 from the segmental member 7, whereupon the threaded pintle 14 being exposed may be removed to separate the hinge members or leaves. The parts may, of course, be assembled by reversing these operations.

The invention being intended to be pointed out in the claim, is not to be limited to or by details of construction of the particular embodiment thereof illustrated by the drawing or hereinbefore described.

I claim:

In a structure of the character described comprising a pair of parts having a swinging interrelative movement, one of said parts being a box having a side wall with an inwardly extending flange, and the other one of said parts being a flat closure for the box having a recess adjacent its inner edge; a hinge connecting said parts comprising a member forming an extension of said wall and a member forming a friction plate carried by the other one of said parts at right angles to the axis of said swinging movement and extending through said flange, said members being detachably connected pivotally inside said recess; a casing detachably connected to said flange on its under side; a pair of friction plates in the casing extending parallelly with, and frictionally bearing on, the opposite sides of the first-mentioned friction plate, the casing when detached and said pair of friction plates being removable from said flange in a direction parallel with all of said friction plates; threaded means for detachably connecting the casing with said flange.

In testimony whereof I have hereunto set my hand at Grand Rapids, Michigan this 11th day of February, 1931.

GEORGE H. HAMILTON.