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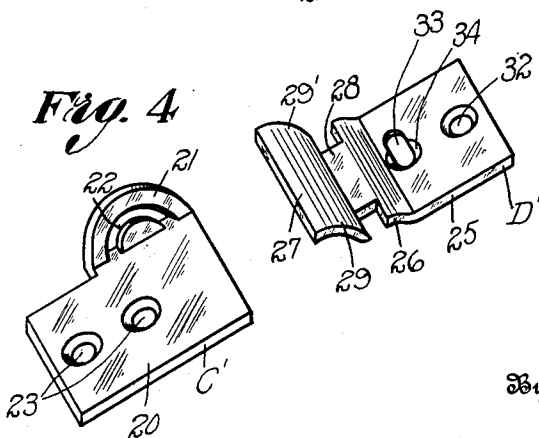
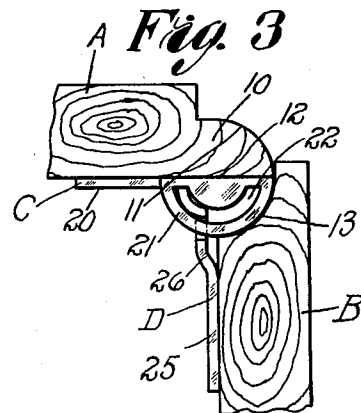
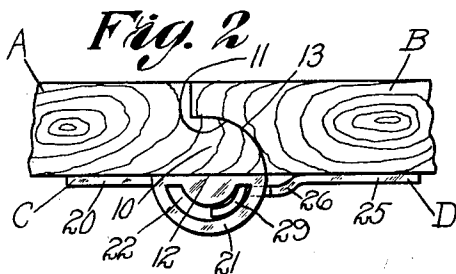
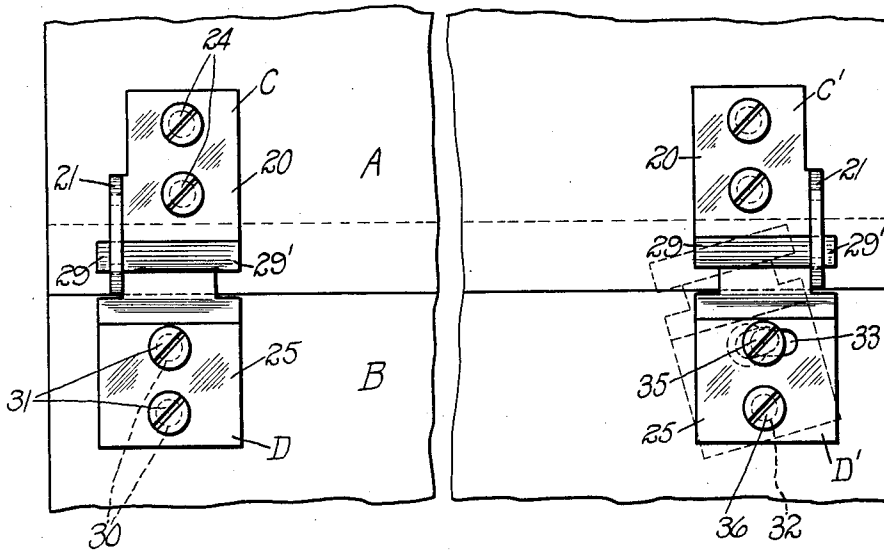
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1,962,709

HINGE

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Fig. 1



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HINGE

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3 Claims. (Cl. 16—178)

The present invention relates generally to hinges, and has particular reference to hinges of the type for pivotally connecting together a pair of members, the opposed edges of which are provided with a complementary rib and groove arrangement so that when the hinge is in open position there is little or no space between the members. More particularly, my improved hinge finds peculiar adaptation in pivoting the swinging leaves of tables, and similar articles of furniture.

The aim of the present invention is to provide an improved hinge having various features of novelty and advantage, and which is particularly characterized by its extreme simplicity, by its economy in manufacture, by the ease and facility with which it may be applied, and by its effectiveness in operation.

My improved hinge is so constructed that two of them, when properly applied, will, without any auxiliary or supplemental appliance, hold the parts in assembled relation. The swinging member may be easily detached from the table top without removing the parts of the hinges from the respective members. Furthermore, the construction is such that a good bearing surface is obtained between the hinge parts, and the swinging member or table leaf is hung for pivotal movement about a predetermined fixed center in such manner that when the leaf is lowered or raised it will not rub against, or mar, the stationary member to which it is pivoted.

Other objects will be in part obvious, and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

In the accompanying drawing, wherein I have shown, for illustrative purposes, one embodiment which the present invention may take,

Figure 1 is a fragmentary view looking at the underside of two members pivotally connected together by a pair of my improved hinges;

Figure 2 is an end view of what is shown in Figure 1;

Figure 3 is a view similar to Figure 2 but showing the swinging member in lowered or depending position; and

Figure 4 is a perspective view of the two parts of my improved hinge.

In the accompanying drawing I have shown, for illustrative purposes, my improved hinge ap-

plied to what may be considered as a piece of furniture, such as a table, as it is peculiarly adapted for use in that connection. Obviously, however, the hinge has other adaptations. It may be assumed that the member A designates the body portion or top of a table, and that the letter B designates a pivoted leaf which may be termed generally as a swinging member. The side edge of the top of the table has a rib 10 which is rounded, as at 11, about a center 12. The opposing edge of the leaf B has a complementary configuration, that is, it has a groove, the surface 13 of which is curved correspondingly to the surface 11 so that, when the leaf B is in the raised position shown in Figures 1 and 2, the rib is received, so to speak, within the groove.

Referring now to my improved hinge, this is formed of two leaves designated generally by the letters C and D, the former of which may be referred to as the female leaf, and the latter as the male leaf. Each of these leaves is, by preference, formed from sheet metal by stamping out a blank of the desired configuration and then bending the blank to the shape desired. The female leaf C has a flat attaching portion 20 from one edge of which projects, at right angles, a flange 21 having a curved slot 22 which constitutes a guide-way. This slot is struck about a center which lies in the plane of that face of the attaching portion which engages the member A, and when the leaf is applied, as shown in Figure 2, that center coincides with the center 12. The attaching portion has apertures 23 adapted to receive the usual attaching screws 24.

The male leaf has an attaching portion 25 offset at its forward end as at 26; a pintle portion 27, and a neck portion 28 between one edge of the pintle portion and the offset portion. The opposite ends of the pintle portion extend laterally beyond the neck 28, and constitute projections 29 and 29' adapted to be received by the slots 22 in the female leaves. The pintle portion 27 is straight in the direction of its length, that is, it is parallel to the axis of the hinge, but it is curved or rounded transversely, and preferably the pintle portion is struck about a lesser radius than is the slot 22 in the female member.

For sale and distribution, the hinges are preferably put up in pairs, one hinge for attachment to the left-hand end of the swinging member, and the other hinge for attachment to the right-hand end of that member. The respective female members of the pair of hinges will be made right-handed and left-handed; that is to say,

one of the leaves C will have its flange 21 located at the forward left-hand edge of the attaching portion, while the other female leaf, designated by the letter C', will have its flange at the forward right-hand edge of the attaching portion. One of the male leaves of the pair of hinges may have two or more round openings 30 adapted to receive attaching screws 31. The other male leaf, designated by the letter D', may have, adjacent its rear end, a round opening 32 adapted to receive a screw 36. Forwardly of that opening is an elongated transversely extending slot 33, one end of which is counterbored at 34 to receive the head of an attaching screw 35.

In applying the hinges, right-handed and left-handed female members may be connected to the underside of the table top A adjacent the respective opposite ends thereof, and with the centers about which the slots 22 are struck coincident with the axis 12 about which the surface 11 is struck. The male leaves may be secured to the swinging member before the latter is attached to the table, except that the screw 35 which extends in through the slot 33 is not turned home. The leaf may be in the dotted line position shown in Figure 1. The swinging member B may then be positioned in place with the projection 29 of the leaf D engaging in the slot 22 of the leaf C. Then the male leaf D' is turned about the screw 36 from the dotted line position to the full line position of Figure 1, so as to engage the projection 29' in the slot 22 of the leaf C'. The screw 35 may now be turned home so as to engage the head in the counterbore 32, thus securing the leaf in the full line position shown in Figure 1.

It will be observed that the swinging member B cannot move in the direction of its length, as the male members are positioned between the flanges 21 which constitute stops. When the swinging member is raised or lowered, the bearings or projections 29 and 29' will slide in slots 22 about the center 12. As stated, the projections 29 and 29' are of lesser curvature than the slots 22 so that there is a three point bearing, so to speak, between each projection and the walls of the slot with which it engages, (which gives a better and smoother acting arrangement than would be the case if the projections were curved correspondingly to the slots. In the swinging movement of the member B it is supported by the hinges in such manner that the curved surface 13 will closely follow the curved rib 10 without, however, rubbing against that rib and marring the finish thereof. The swinging member may be easily and quickly taken off by backing out

the screw 35 and turning the leaf D' to the dotted line position of Figure 1.

It will thus be seen that there is provided a simple and effective hinge which may be made at a relatively low cost and which may be easily applied.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

What is claimed is:

1. In a hinge of the character described, a pair of cooperating leaves, one of said leaves having a substantially flat attaching portion and a flange at one edge of said attaching portion and extending at right angles to one face thereof, said flange having a curved slot struck about an axis lying in the plane of the opposite face of said attaching portion, the other of said leaves having an attaching portion and an offset laterally-extending curved projection slidably engaging in said slot.

2. In a hinge of the character described, a pair of cooperating leaves adapted to swing about a given pivotal point, one of said leaves having an attaching portion and a portion provided with a slot curved about the pivotal point of the hinge, the other of said leaves having an attaching portion and a curved projection extending into and slidable in said slot, said projection having a smaller radius than that of said slot.

3. In a hinge of the character described, a pair of cooperating leaves, one of said leaves having an attaching portion and a flange at right angles to the plane of said attaching portion provided with a curved slot, the other of said leaves having an attaching portion and a transversely extending projection adapted to slidably engage in said slot, the attaching portion of one of said leaves having a round screw-receiving opening about which the leaf is adapted to be swung to engage and disengage said projection in said slot when assembling and disassembling the parts, said attaching portion also having a transversely extending slot provided with a counterbore at one end adapted to receive the head of an attaching screw.

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