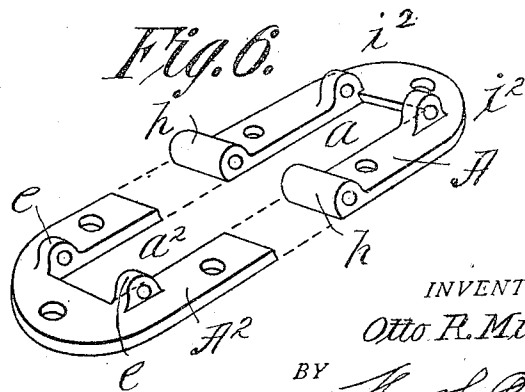
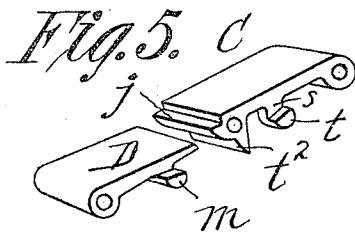
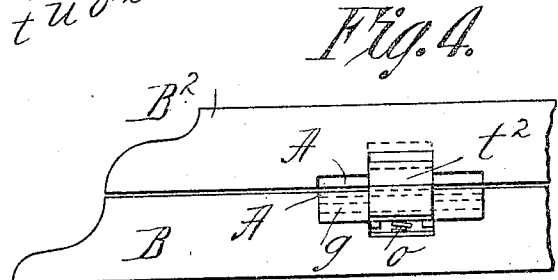
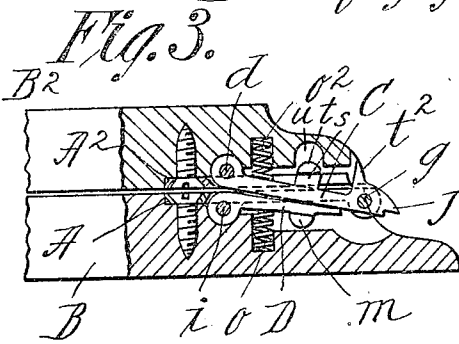
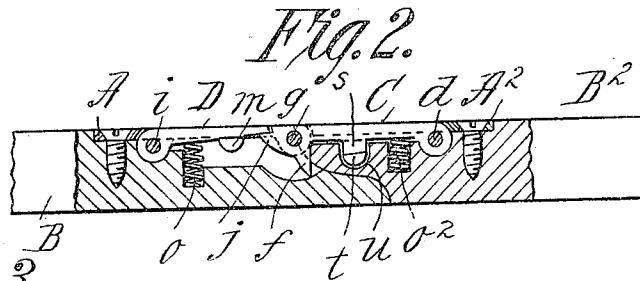
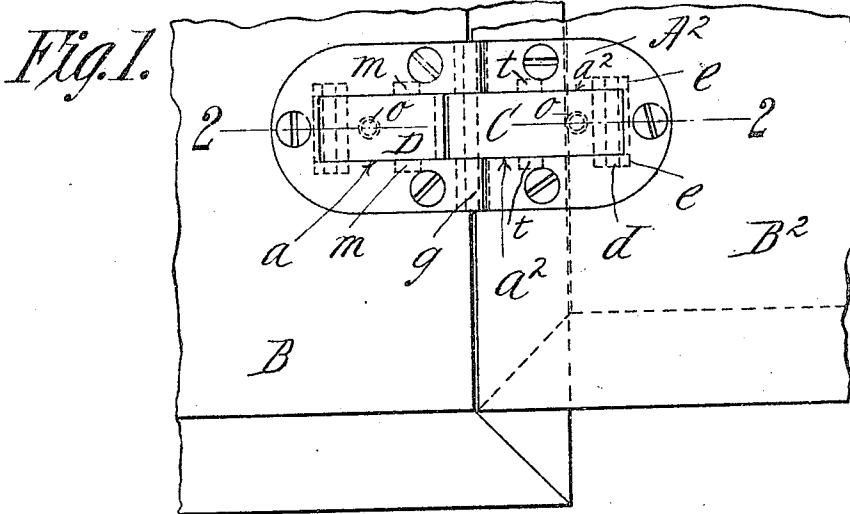


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HINGE.
APPLICATION FILED JUNE 30, 1909.

949,490.

Patented Feb. 15, 1910.



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HINGE.

949,490.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, OTTO R. MILKE, a citizen of the United States of America, and resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Hinges, of which the following is a full, clear, and exact description.

The object of this invention is to provide a hinge of such construction that when the hinge-connected parts have relations one in extension of the other and both in the same plane, there will be no portion of the hinge at the adjacent edges of the connected parts which stands above the top face of such parts, while, on the other hand, there is no opening or cavity at the location of the hinge.

Such a hinge as acquired by the exercise of this invention is particularly advantageous and desirable for sewing machine tops, and especially those which are known as "drop tops" used where the sewing machine is automatically caused to disappear below the table proper when the extension leaf is overturned on the table.

The invention consists in the combination or arrangement of parts and the construction of the parts of the hinge all substantially as hereinafter described and set forth in the claims.

In the drawings:—Figure 1 is a plan view of my improved hinge as applied for connecting the table top proper and a leaf or extension thereof. Fig. 2 is a vertical section on line 2—2, Fig. 1, the parts being shown as in extended relations. Fig. 3 is a view similar to Fig. 2, with the parts shown as in folded relations. Fig. 4 is an edge view of Fig. 3. Figs. 5 and 6 are perspective views of the most important portions of the hinge shown in separated relations,—those in Fig. 6 being represented inverted.

In the drawings A and A² represent hinge plates adapted to be sunk in mortises in parts to be connected, such, for instance, as the table top B and its leaf or extension B². These frame plates have alined apertures *a* and *a*² opening to their matching edges.

C represents a link bar which is fitted in the aperture *a*² of the frame plate A² and having its one end connected by pivot *d* to the frame plate near the inner end of the aperture *a*² therein,—such frame plate having as shown at Fig. 6, the depending op-

posed ear lugs *e e*; and said link bar extends beyond the matching edge of the frame plate A² for a slight distance within the aperture in the frame plate A and is, by pivot *g*, connected to the frame plate A, such plate being swelled or thickened as indicated at *h h* and perforated for the reception of the pivot pin which has a driving fit therethrough.

D represents a lever-like bar which by its one end portion is pivotally connected to the frame plate A at the inner end of the aperture *a* therein,—*i* representing the connecting pivot and *i*², *i*², the depending ear pieces provided to such plate A through which the pivot passes with a driving fit.

The link bar C is provided at its end adjacent its pivot with an engagement toe *j* which is so related to the end of the lever-like bar D that when the latter is swung over from the position shown in Fig. 3 to that shown in Fig. 2, such toe will engage and dig up the end of the bar D and move it to its position flush with the top face of the hinge frames, the link bar also at such time assuming the flush relation.

The lever like bar D has transverse trunnion-like stop members *m, m*, which engage under the frame plate A at the opposite margins of the aperture *a*,—the locations of the stops being such as to limit the upward movement of the part D so that it will acquire its flush position as shown.

o and *o*² represent spiral springs which in the present instance are shown as under and exerting stress upwardly relatively to both the running bars C and the lever like bar D.

The link bar C is provided with a downwardly extending transverse flange or lip *t*² which is operative, when the hinge parts are in folded relations as shown in Fig. 3, to form a closure for the opening head in the hinge connected part for the accommodation of the hinge.

When the hinged parts have folded relations as shown in Fig. 3, in which it is perceived that the line of the link C between the pivots *g* and *d* is one obliquely crossing the plane of the top of the hinge frame A and space must be allowed for occupancy of a portion of the link in such position below the plane of the top of the hinge plate, the yielding, in a downward direction, of the lever-like member D insures the proper freedom of action as manifest.

The link bar C has at each side, and inter-

mediate of its length, downwardly extending members *s* with outwardly extending lugs *t* accommodated in recesses *u* on the part on which the hinge plate A^2 is secured.

5 These lugs *t* prevent the possibility of the hinged part B^2 being swung upwardly in any extended degree, from the pivot *i* as its fulcrum, by reason of the stop lugs *t* having positions for engagements under the
10 plate A^2 at the margins of the aperture a^2 therein.

I claim:—

1. In a hinge, in combination, a pair of frame plates both having alined apertures
15 opening to their matching edges, a link bar fitted in the aperture of one of the frame plates having its one end pivotally connected to such plate, and having its other end pivotally connected to the other frame plate, and
20 the other frame plate having a bar pivoted thereto at the inner end of its aperture and having its extremity terminating to form with the link bar a flat and substantially continuous closure for the matching aper-
25 tures of both plates.

2. In a hinge, in combination, a pair of frame plates having matching apertures opening at their adjacent edges, a link bar
30 at the inner end of its aperture and having its other end extending beyond the aperture in such frame plate and pivoted to the other frame plate near its matching edge, and a bar fitting in the aperture of the other frame
35 plate, and pivoted at its inner end to the latter, and means to limit the upward move-

ments of said bars relatively to the frame plates.

3. In a hinge, in combination, frame plates having apertures opening to their matching
40 edges, one of said plates having a link bar pivoted in the aperture thereof near the inner end of the latter, and said bar extending beyond the end of the aperture and hav-
45 ing an engagement toe, the other frame plate having a bar in the aperture thereof pivotally connected to such plate near the inner
end of its aperture and having its other end extended to position near the outer end of
its aperture and adapted to be engaged by
50 said toe of said link.

4. In a hinge, in combination, a pair of frame plates having apertures opening to
their matching edges, a pair of bars fitted in said apertures, both being pivotally con-
55 nected to the respective plates near the inner ends of the apertures, one of said bars also having a pivotal connection to the frame plate opposite that to which it is itself piv-
otally connected, both of said bars having
60 laterally extending stops for engagement with the undersides of the frame plates, and springs exerting an upward pressure to said plates.

Signed by me at Springfield, Massachu-
65 setts, in presence of two subscribing witnesses.

OTTO R. MILKE.

Witnesses:

G. R. DRISCOLL,
WM. S. BELLOWES.