Feb. 19, 1924. 1,484,009

H. W. CORNING

HINGE

Filed Dec. 27, 1919

Fig. 1

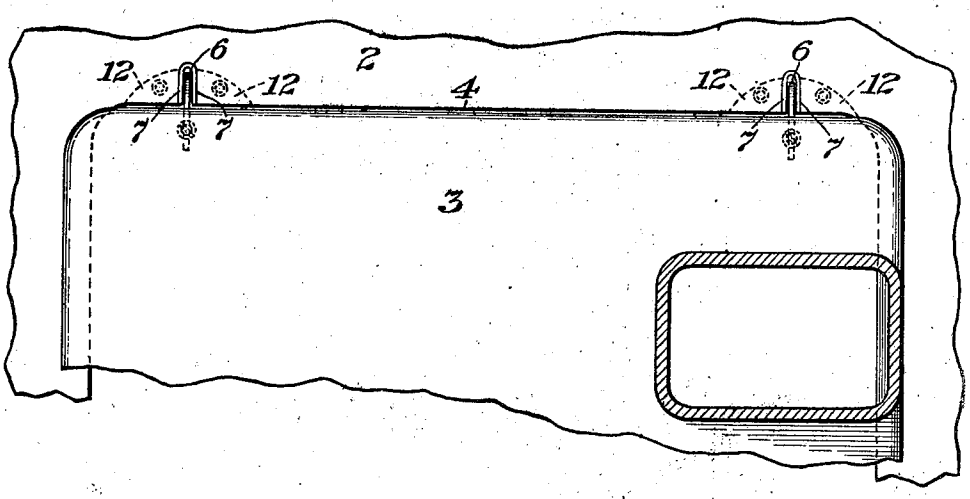


Fig. 2

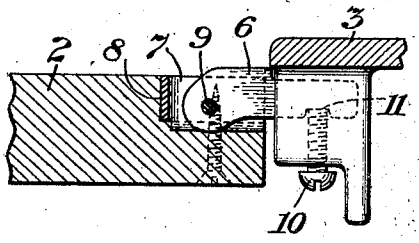


Fig. 3

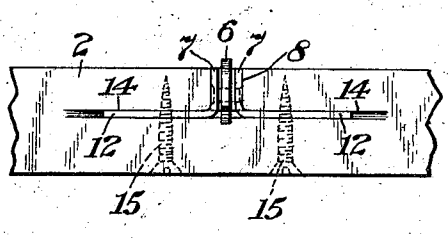
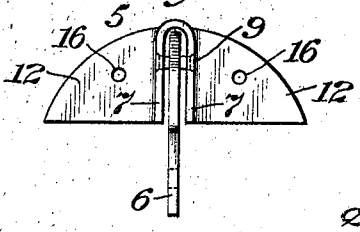


Fig. 4



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UNITED STATES PATENT OFFICE.

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HINGE.

Application filed December 27, 1919. Serial No. 347,759.

To all whom it may concern:

Be it known that I, HENRY W. CORNING, a citizen of the United States, and resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Hinges, of which the following is a specification.

This invention relates to hinges and has special reference to that class of hinges adapted for connecting a sewing or other machine to its supporting table in a manner whereby the machine may be tilted in a direction to expose the mechanism at its under side for adjustment, repairs, or other desired purpose.

One of the objects of the invention is to provide an improved hinge connection of the type referred to that will be substantially concealed from view so as not to deface or disfigure the upper or exposed surface of the supporting table.

Another object of the invention is to provide an improved hinge construction of the type in question that will permit of an effective connection between the hinge and the table or like support without strain on the screws or similar fastening means, and also without strain on the table or wood-work such as would tend to crack or injure the same.

These, and other objects to be hereinafter referred to, are attained by the novel construction, arrangement and combination of parts as illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a portion of a sewing machine and sewing machine table connected by a pair of my improved hinges.

Fig. 2 is an enlarged detail, in side elevation and section, showing one of the hinges and its connection with the sewing machine and sewing machine table.

Fig. 3 is an edge view of a portion of the table with one of the hinges connected therewith, and—

Fig. 4 is a top plan of one of the hinges disconnected from the table.

Similar reference characters indicate like parts in the several figures of the drawings.

Only so much of a table and a machine are here shown as is necessary to illustrate the application and use of my improved hinge, the portion of table shown being indicated at 2, and the machine at 3.

The table 3, like the tables or platforms of all sewing machine stands or cabinets, is provided with an opening 4 to receive the machine, or rather the mechanism at the under side of the bed-plate of the machine, the bed-plate itself being usually formed at its ends to overlie and rest upon the table, as shown in Fig. 1. For connecting the machine with its supporting table in a manner to permit of its being tilted upward to expose the mechanism at its under side, a pair of hinges are usually employed, as indicated in Fig. 1, which connect with the machine at its rear edge. As both hinges are similarly constructed, mounted and operated, a detailed description of one only will here be made.

The hinge comprises two main members pivotally connected together, one of which, indicated at 5, is adapted to be attached to the table in a stationary position, and the other of which, indicated at 6, is adapted to be attached to the machine.

The stationary hinge member 5 is here shown as formed with two connected parallel walls 7, 7, which are adapted to be seated in a vertical groove or cut-out 8 in one edge of the table 2 with their top and front ends substantially flush with the adjacent surfaces of the table as shown. Located between these walls and connected with them by a transverse pivot pin 9, is the inner end of the movable hinge member or tongue 6, which latter at its free end is adapted to be suitably connected with the machine, the connection as here shown being effected in usual manner by entering the end of the tongue into an opening in the machine casting and detachably connecting the same therewith by means of a fastening screw 10 engaging said tongue within a recess 11 at its under side, as shown in Fig. 2.

As a means for securing the stationary member 5 in connection with the table, I have provided the same with lateral flanges or extensions 12, 12, at opposite sides thereof which project into horizontal groove sections 14, 14, formed in the table about mid-

way between its upper and lower surfaces and intersecting the vertical groove 8, as most clearly shown in Fig. 3.

As practically all of the strain on the hinge connection, through the raising and lowering of the machine, is in a vertical direction, it is taken by said horizontal flanges 12, and these, by reason of their substantial area within the wood-work of the table, so distributes the strain on the latter as to preclude the liability of the member 5 being withdrawn from its connection with the table under such strain, and also by reason of such extended distribution of strain on the wood-work, liability of cracking or breaking the latter is effectually avoided.

Preferably and as here shown the member 5 is fastened in its seat within the table by means of fastening screws 15, which are entered through openings 16 in the flanges 12 from the under side of the table. These fastening screws, however, are merely for the purpose of holding the member 5 against horizontal displacement in its seat and are not subjected to any vertical strain, which latter, as before stated, is taken wholly by the horizontal flanges 12.

The member 5 can be made up in any suitable or desired way, but preferably and as here shown, the several parts thereof are made or struck up from a single piece of metal, the vertical walls 7, 7, being formed from one piece bent upon itself, and the flanges 12, 12, being outwardly bent extensions of said walls, as shown.

The hinge construction as shown and described is simple and inexpensive to make and is also capable of ready and convenient connection with and disconnection from the machine and its supporting table.

What I claim is:—

1. In combination, a table having in one edge thereof a vertical groove and a concealed intersecting horizontal groove, a hinge supporting member seated within said vertical groove and having a lateral extension projecting into the horizontal groove, and a hinge member pivotally connected with said supporting member.

2. In combination, a table having in one edge thereof a vertical groove and concealed intersecting horizontal groove sections, a hinge supporting member seated within said vertical groove and having lateral extensions at opposite sides thereof projecting into the horizontal groove sections, and a hinge member pivotally connected with said supporting member for movement in a vertical plane.

3. In combination, a table having in one edge thereof a vertical groove and concealed intersecting horizontal groove sections, a hinge supporting member seated within said vertical groove and comprising two connected spaced walls each having a lateral extension projecting into the horizontal groove sections, and a hinge member pivotally connected with said supporting member between the spaced walls thereof.

Signed at Cleveland, in the county of Cuyahoga and State of Ohio, this 9th day of December A. D. 1919.

HENRY W. CORNING.