J. FOSTER.

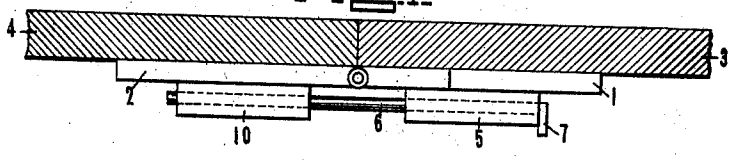
HINGE.

APPLICATION FILED MAY 24, 1910.

980,622.

Patented Jan. 3, 1911.

Fig. 1.



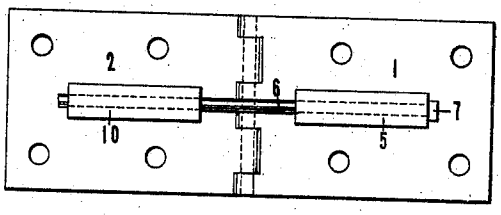




Fig. 2.

Fig. 3.

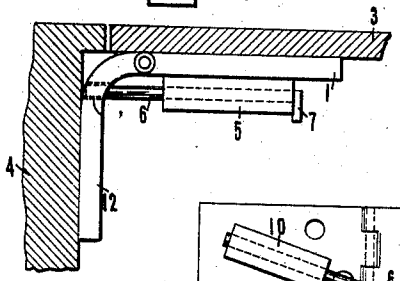
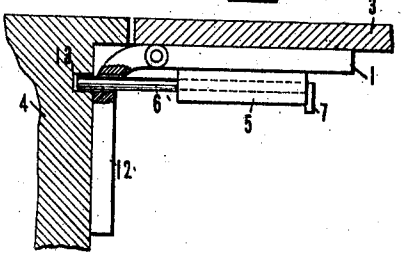



Fig. 4.



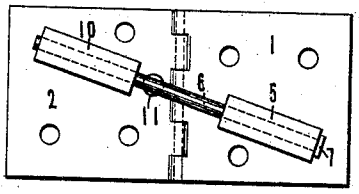




Fig. 8.

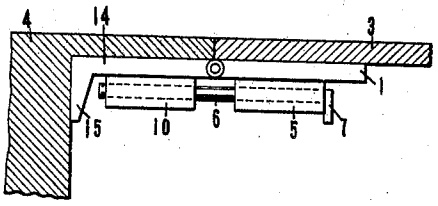



Fig. 5.

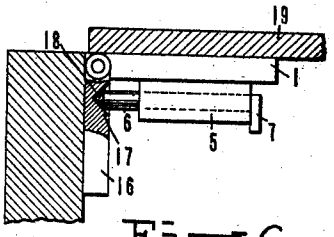



Fig. 6.

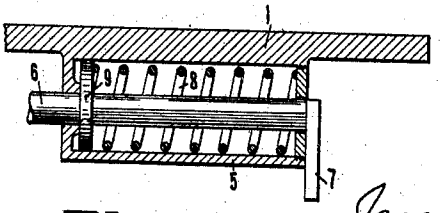



Fig. 7.

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## HINGE.

980,622. Specification of Letters Patent. Patented Jan. 3, 1911.

Application filed May 24, 1910. Serial No. 563,109.

*To all whom it may concern:*

Be it known that I, JOSEPH FOSTER, a subject of the King of Great Britain, residing at No. 17 Lentz avenue, Newark, New Jersey, have invented new and useful Improvements in Hinges, of which the following is a specification.

This invention relates to hinges and more especially to devices of this character provided with means for maintaining them in fixed positions.

One of the objects is to provide a device which is simple in operation and not liable to break or get out of order.

Another object is to provide a device which may be secured in position by unskilled laborers in a short time.

Another object is to provide a device of this character which will be inexpensive to manufacture.

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

In the accompanying drawings showing several illustrated embodiments of this invention in which the same reference numerals refer to similar parts in the several figures, Figure 1 is a side elevation of the device adapted for use with a swinging shelf which, when in operative position, forms an elongation of a table top or similar device. Fig. 2 is a plan view of Fig. 1. Fig. 3 is a side elevation of a modification of the device, adapted for use where the hinge leaves extend at an angle to one another. Fig. 4 is a side elevation of a slightly modified form, parts being shown in section for the sake of clearness. Fig. 5 is a view similar to Fig. 1, showing a further modification. Fig. 6 is a side elevation of a modification of the device adapted to be used in connection with doors and the like, parts being shown in section for the sake of clearness. Fig. 7 is a detailed sectional view showing one form of bolt construction. Fig. 8 is a plan view, showing a still further modification of the device in which the leaves are adapted to be fixed in a plurality of positions.

Referring to Figs. 1 and 2 of the drawings, the hinge is shown as consisting of two leaves, 1 and 2, one of which, as 1, is secured to the swinging leaf 3, the other being secured to the ledge or table portion 4 of an article of furniture. Positioned upon one of the leaves, as 1, to which it is secured in any suitable manner, is a casing 5, within which a bolt 6 is slidingly mounted. This bolt may be of any ordinary construction and is preferably provided with a suitable head 7, by means of which it may be manipulated. The bolt is preferably maintained in its extended position, in order to render the device automatic, through the agency of a suitable spring 8, see Fig. 7, which by way of illustration is shown as being inclosed within the casing 5, having one of its ends engaging the casing and its other end engaging a shoulder 9, with which the bolt is provided. It will, of course, be understood that any other suitable means may be provided for maintaining the bolt in its extended position. Positioned upon the other leaf 2, is a socket 10, adapted to receive the free end of the bolt 6 for retaining the hinge in its operative position, as shown in Figs. 1 and 2. When it is desired to allow the leaf 3 to assume its inoperative position it is merely necessary to withdraw the bolt from the socket 10 and permit the leaf to assume a vertical position with respect to the portion 4. If it is desired to again cause the leaf to assume its operative position, it is merely necessary to raise the same, the free end of the bolt 6 entering the socket 10 automatically by reason of the spring 8, as above described.

In Fig. 3 there is shown a hinge in which the socket 11, adapted to receive the free end of the bolt 6, is formed within one of the leaves, 12, itself, at an angle to its surface, as indicated by dotted lines. A hinge so constructed is adapted for use where the leaves of the hinge must extend at an angle with one another in order to retain the swinging member 3 in its operative position, as, for example, where the table or desk is not provided with a ledge wide enough to have one of the hinge leaves secured thereto. In some instances it may be desirable to form a recess within the body portion of the article to which the leaf 12 is secured in order that the extreme end of the bolt may enter therein to provide a firmer support for the swinging member 3. Such a construction is shown in Fig. 4, in which 13 indicates the recess. In all other respects the hinge is the same as that shown in Fig. 3. In both of these figures the leaf 12 which is provided with the bolt receiving socket is shown as having its inner side curved slightly outward in order that the swinging member may assume a vertical

position without permitting the outer surface of the casing 5 to come into contact with the leaf 12.

In Fig. 5 there is shown a hinge similar to the hinge shown in Figs. 1 and 2. In this modification one of the leaves, 14, is provided at its outer edge with an extended bearing portion, 15, adapted to abut against the article to which the leaf is secured to form a more strong support.

Fig. 6 shows a modified form of the hinge which is adapted to be used upon doors and the like. In this modification the leaf 16, is provided with a socket 17 having an inclined surface and the free end of the bolt 6 is cut away to form an inclined surface 18, adapted to co-act with the inclined surface of the socket. By means of this construction when the door, 19, is open it will be held in such position by reason of the free end of the bolt 6 engaging within the socket, it being understood that the tension of the spring, 8, within the casing, 5, is sufficient to prevent the closing of the door owing to slight circulation of the air. On the other hand, of course, if it is desired to close the door, the force exerted by the person closing the same will be sufficient to overcome the tension of the spring, permitting the inclined end of the bolt to ride up the inclined surface of the socket and pass out of the same.

In Fig. 8 the casing 5 and socket 10, which are constructed as shown in Figs. 1 and 2 are shown positioned upon the leaves 1 and 2 at an angle with the main longitudinal axis of the hinge, the bolt assuming a diagonal position with respect to such axis. In this modification the leaf 2 is shown as being provided with a socket 11 formed therein similar to the socket 11 shown in Figs. 3 and 4, thus enabling the hinge to be used either in the position shown, in which the leaves are in the same plane when in their operative positions, or in the position shown in Figs. 3 and 4, in which the leaves are at right angles to each other when in their operative positions. By placing the casing 5 and socket 10 at an angle, as indicated, it will be seen that as the leaves are folded together, the casing 5 will lie alongside of the socket 10 and not contact therewith, as would be the case if they were positioned as indicated in Figs. 1 and 2.

From the above description it will be seen that the improved device is adapted for a great many purposes. It can, of course, be applied to boxes or trunks or, in fact, to any article or receptacle in which one member is hinged to another member and in which it is desired to provide means for holding the hinged member in a fixed position. The invention, therefore, is not to be restricted to the uses illustrated. It will be further seen that the device is composed of but few parts; that it may be manufactured at low cost and that it may be secured in position by unskilled labor, inasmuch as it is not necessary for the person affixing the same to aline the bolt and its casing with the socket when the device is being placed in position. By the use of a spring, such as indicated in Fig. 7, the device is rendered automatic, locking the parts in their fixed position as soon as such position is attained.

Having described this invention in connection with the several illustrative embodiments thereof to the details of which disclosure the invention is not, of course, to be limited, what is claimed as new and what is desired to be secured by Letters Patent is set forth in the appended claims.

1. In a hinge, in combination, a pair of leaves rotatively secured together, a casing secured to one of said leaves, the other of said leaves being provided with a socket and a bolt movably mounted within said casing and adapted to engage said socket when the leaves are in alinement, said casing and said socket being in a line forming an angle with the longitudinal axis of the hinge, whereby when the leaves are folded together said casing will lie at one side of the socket.

2. In a device of the character described, in combination, a pair of leaves hinged together, and a bolt mounted upon one of said leaves, the other of said leaves having a socket mounted thereon, said socket extending parallel with the surface of said leaf to receive the free end of the bolt when the leaves are in alinement with one another, said other leaf being provided with a second socket extending at an angle to the surface thereof to receive the free end of the bolt when the leaves are at an angle with one another, said sockets being positioned between the inner and outer edges of the leaf with which they are associated.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH FOSTER.

Witnesses:
WM. P. JONES,
ALBERT F. HENMAN.