(No Model.)

T. CORSCADEN.

LOCK HINGE.

No. 451,969. Patented May 12, 1891.

Fig. 1.

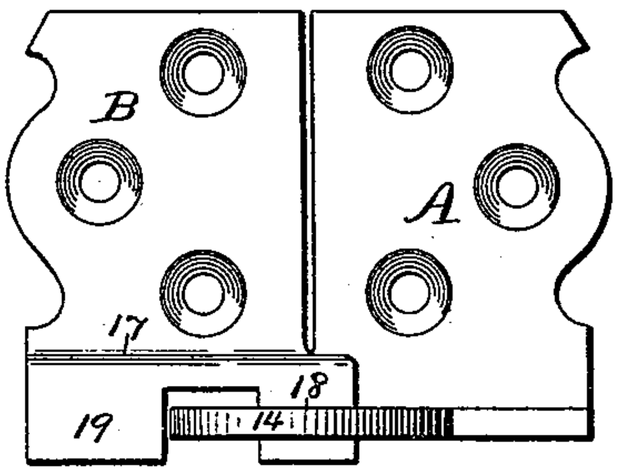


Fig. 2.

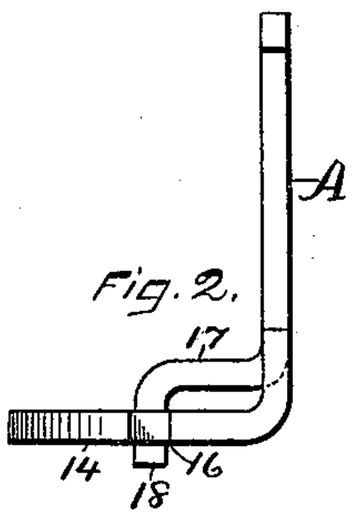


Fig. 3.

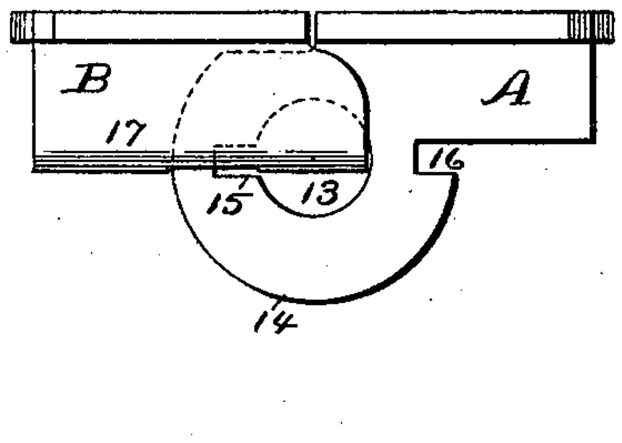


Fig. 4.

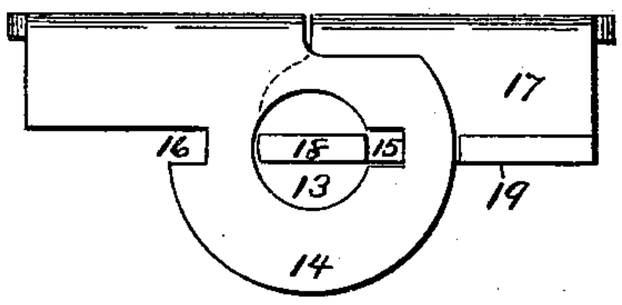


Fig. 5.

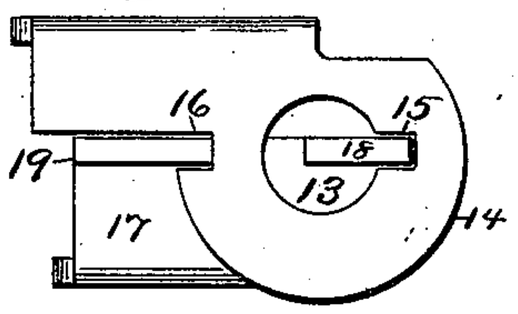


Fig. 6.

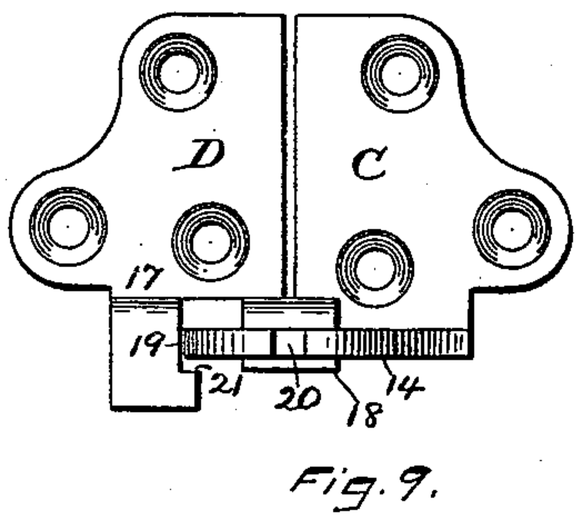


Fig. 7.

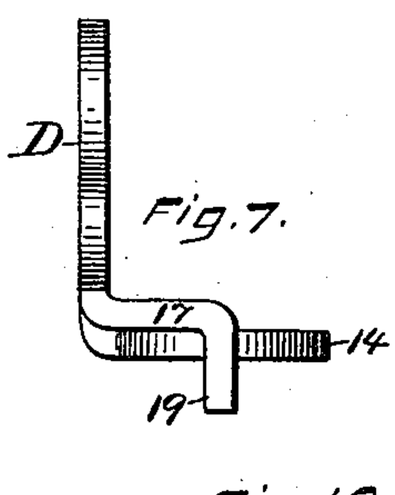


Fig. 8.

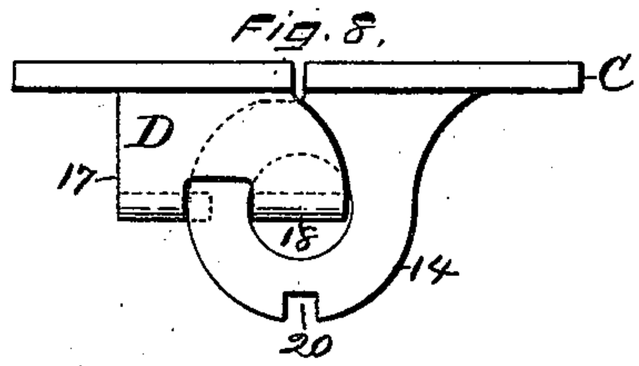


Fig. 9.

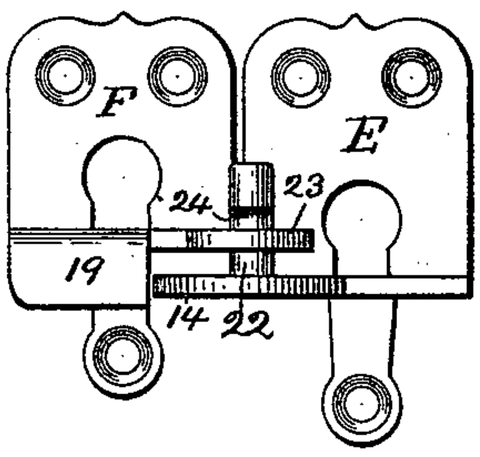


Fig. 10.

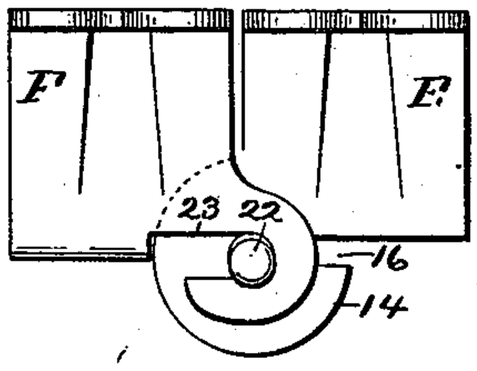


Fig. 11.

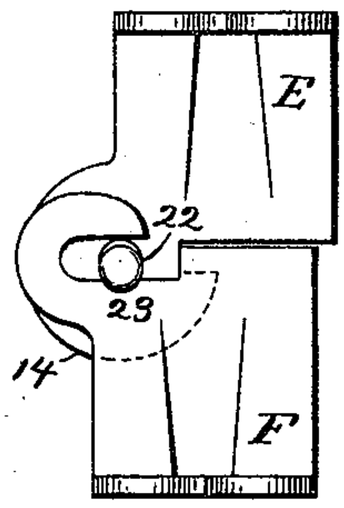
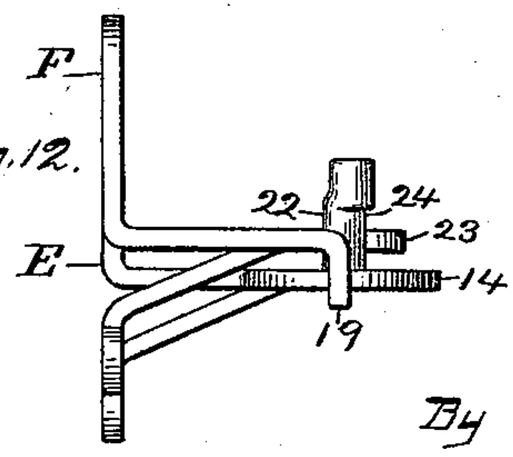


Fig. 12.



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W. H. Whiting.

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Atty.

UNITED STATES PATENT OFFICE.

THOMAS CORSCADEN, OF NEW BRITAIN, CONNECTICUT.

LOCK-HINGE.

SPECIFICATION forming part of Letters Patent No. 451,969, dated May 12, 1891.

Application filed August 11, 1890. Serial No. 361,616. (No model.)

To all whom it may concern:

Be it known that I, THOMAS CORSCADEN, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Blind or Shutter Hinges, of which the following is a specification.

My invention relates to improvements in blind or shutter hinges of the class which lock the blind or shutter open by means of gravity; and the objects of my invention are simplicity and economy of construction and efficiency in use.

In the accompanying drawings, Figure 1 is a front elevation of the lower hinge, the same being in the position it will have when the blind or shutter is closed. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view; Fig. 4, a reverse plan view. Fig. 5 is a reverse plan view of the same with the shutter open and locked. Fig. 6 is a front elevation of the upper hinge for use in connection with said lower hinge. Fig. 7 is a side elevation of the same. Fig. 8 is a plan view of the same. Fig. 9 is a front elevation of my lower hinge in a somewhat modified form. Fig. 10 is a plan view of the same. Fig. 11 is a side elevation of the same as represented with the shutter open and locked, and Fig. 12 is a side elevation of the same in a closed position.

I prefer to construct the entire hinge of sheet metal, including the pintle, and it is so shown in Figs. 1 to 8, inclusive.

A designates that leaf of the lower hinge which is designed to be secured to the house, and B the companion leaf, which is designed to be secured to the blind or shutter. The leaf A has an upright portion provided with ordinary screw-holes for resting flatly against the house. Its lower end is bent outwardly to form a horizontal arm having a disk-like outer edge 14, and a pintle-hole which is concentric with said outer edge. The pintle-hole is slotted on its left-hand side, as at 15, and the arm, with its disk-like edge, is slotted at the right-hand side, as at 16, diametrically opposite the slot 15. The companion leaf B is provided at the lower end of its upright portion with an outwardly-turned wing 17, provided with a depending flange divided into two members—namely, the pintle 18 for fitting the pintle-hole, and a bearing-lug 19 for bearing against the outer edge of the disk-like portion 14. The weight of the blind is to be borne by the upper hinge. When the blind is closed, the parts will be in the position shown in Figs. 1 to 4, inclusive. Upon opening the hinge or shutter the pintle-edges bear upon the edges of the pintle-hole while the bearing-lug 19 bears upon the disk-like edge 14, so as to center the hinge firmly. When the blind is fully open, the bearing-lug 19 and pintle 18 have their edges presented to the slots 16 and 15, into which they slip by the gravity of the blind, as shown in Fig. 5, thereby locking the blind firmly in place as soon as the hinges are fully open. The disk-like edge 14 and bearing-lug 19 give the hinge a firm bearing and prevent rattling or working off the proper center when the hinge is being opened.

The top hinge, Figs. 6, 7, and 8, is of the same general construction, in which C represents the leaf for being secured to the house, and D the leaf for being secured to the blind or shutter. The leaf C is also provided with a disk-shaped horizontal arm 14, having a pintle-hole; but instead of the slots 16 and 15 it has a slot 20 at its outer edge on the front side. The companion leaf D is provided with a horizontal arm 17, with a depending flange, the inner end of which forms the pintle 18, and the outer end of which is in the form of a bearing-lug 19 for bearing against the outer edge of the disk-shaped arm. This bearing-lug is also provided with a shoulder 21 at its inner edge which takes under the edge of the disk-like arm 14, and prevents the hinge-leaf D from being lifted out of its companion-leaf to disconnect its pintle, excepting when the shoulder 21 is brought into a position that coincides with the slot 20, and this slot is so located that the hinge will be half-way opened when the shoulder and slot register. By this construction I prevent the shutter from being lifted off its hinges when the hinge is fully opened or fully closed in case a person accustomed to unlocking blind-hinges by lifting the shutter should attempt to so operate this hinge.

In Figs. 9 to 12, inclusive, I employ the same feature of an arm with a disk-like edge 14 concentric with the pintle; but instead of

a sheet-metal pintle I secure a separately-formed pintle 22 in said arm. This arm with the disk-like edge is on the hinge-leaf E, which is designed to be secured to the house, and I provide the edge of said arm with a notch 16, as in the construction first described. The companion leaf F is provided with a horizontal arm 23, the inner corner of which is slotted to hook over the pintle 22, as shown most clearly in Figs. 10 and 11. At the opposite corner of said flange is a bearing-lug 19 for bearing on the outer edge of the disk to center the blind and for engaging the slot 16, as in the construction first described. The slotted wing 23, which receives the pintle permits the bearing-lug to engage the slot 16 at the proper point, while at all other times said bearing-lug 19 bears against the edge of the disk 14, and in connection with the pintle centers the hinge, so that there is no movement transversely to the pintle except when the blind is fully open.

Instead of making provision against lifting the hinges off the pintle in the upper hinge, I have provided the end of the pintle 22 with a shoulder 24 for the same purpose, said shoulder being engaged by the slotted portion of the wing 23 in any attempt to lift the shutter.

I am aware that, broadly considered, it is not new to lock the blind under the force of gravity by means of a movement of one-half of the lower hinge transversely to its pintle.

I claim as my invention—

1. The herein-described sheet-metal hinge, consisting of a pair of leaves, one of which is provided with a horizontal disk-shaped arm, a pintle-hole, and slots 15 and 16, and the other of which is provided with a horizontal arm having a depending flange forming the pintle at its inner end for engaging the pintle-hole and its slot, and a bearing-lug at the outer end of said flange for engaging the outer edge of said disk-like arm and slot 16, substantially as described, and for the purpose specified.

2. The herein-described hinge, consisting of a leaf having a horizontal arm with a disk-like edge, slotted as at 16, a companion leaf having a bearing-lug 19 for bearing against said disk-like edge in opening the hinge and engaging said slot for locking the hinge when opened, and a pintle by which said leaves are connected, substantially as described, and for the purpose specified.

3. The herein-described sheet-metal hinge having a horizontal arm projecting from the upright portion of the leaf and provided with a pintle-hole, and a companion leaf having a flat pintle extended downwardly from its front portion into said pintle-hole, substantially as described, and for the purpose specified.

THOMAS CORSCADEN.

Witnesses:

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