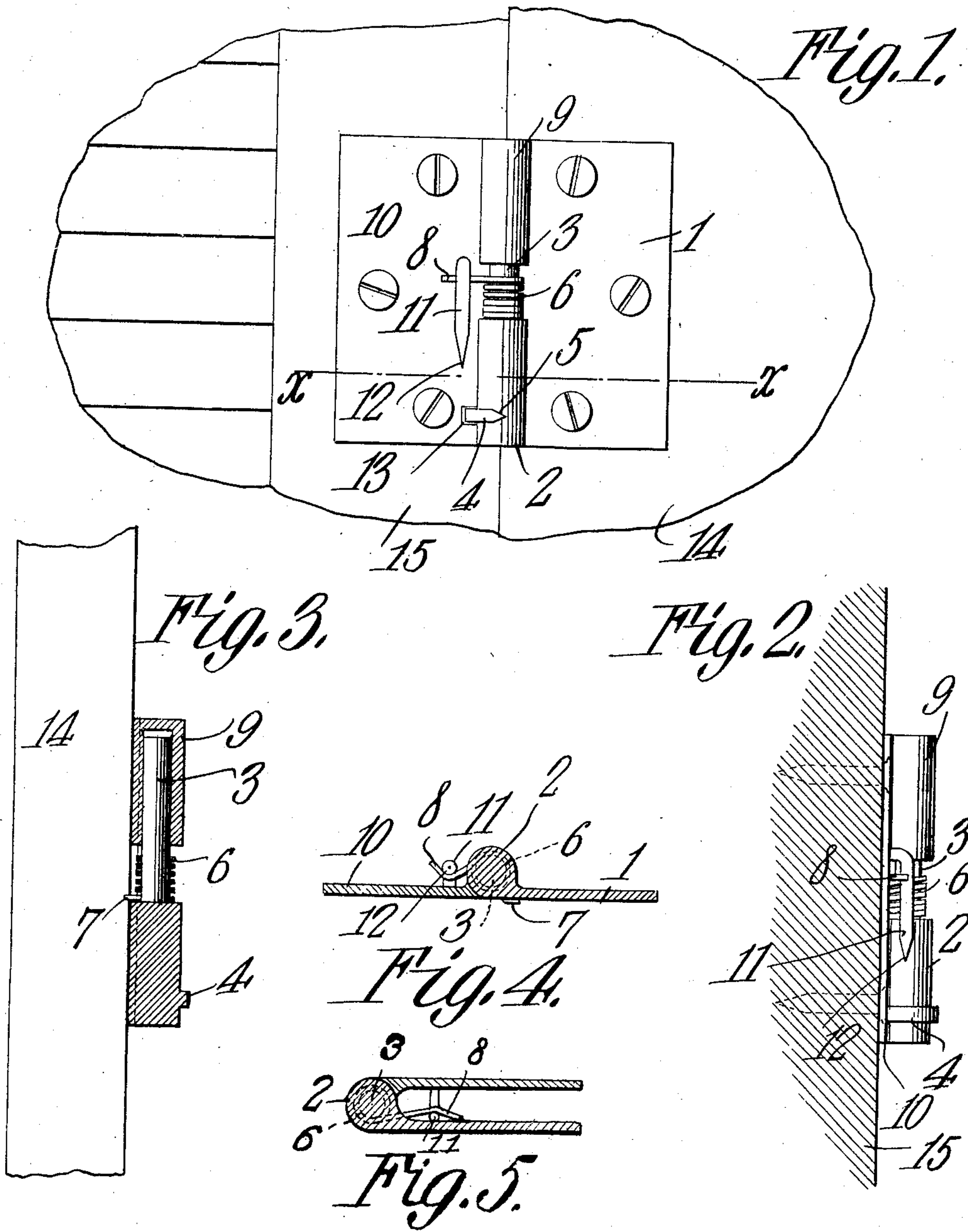


No. 866,791.

PATENTED SEPT. 24, 1907.

J. W. KEOWN.
COMBINED SPRING AND LOCK HINGE.
APPLICATION FILED MAY 8, 1907.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES WALTER KEOWN, OF ROME, GEORGIA.

COMBINED SPRING AND LOCK HINGE.

No. 866,791.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed May 6, 1907. Serial No. 372,157.

To all whom it may concern:

Be it known that I, JAMES W. KEOWN, a citizen of the United States, residing at Rome, in the county of Floyd and State of Georgia, have invented a new and useful Combined Spring and Lock Hinge, of which the following is a specification.

This invention relates to combined spring and lock hinges and is more particularly designed for use in connection with window shutters although it can also be used effectually upon doors and gates.

The object of the invention is to provide a hinge made up of members which can be readily disconnected, said hinge having means whereby the shutter or other object to which it is secured will be held thereby normally in a predetermined position.

A still further object is to provide means for preventing the separation of the hinge members except when said members are disposed in a predetermined relation to each other.

Another object is to provide means for locking the parts of the hinge in a predetermined relation.

It is well known that shutters and the like are often closed and presumably locked but the locks do not work and as a result the shutters remain closed but unsecured.

The object of the present invention is to so construct the hinges that the shutters or other structures to which they are secured will immediately swing open when released if the fasteners do not catch.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is an elevation of the hinge the same being shown secured in position upon a shutter; Fig. 2 is a side elevation of the hinge; Fig. 3 is a central longitudinal section therethrough; Fig. 4 is a section on line $x-x$, Fig. 1. Fig. 5 is a view similar to Fig. 4 and showing the hinge members in their normal positions.

Referring to the drawing by characters of reference, 1 designates a hinge leaf having an elongated substantially cylindrical extension 2 along one edge and one end of which is reduced to form a pintle 3. A combined holding and locking rib 4 extends partly around the extension 2 and that end thereof nearest the leaf 1 is tapered as shown at 5 for the purpose hereinafter set forth. A spring 6 is coiled about the pintle and normally rests against the end of extension 2 and one end of this spring projects back of and engages the leaf 1 as shown at 7 while its other end extends outward to form an arm 8.

The pintle 3 projects into and supports a tubular cylindrical extension 9 formed at one edge of a hinge

leaf 10 and a hook 11 having a pointed end 12 extends parallel with the extension 9 and is designed to engage the arm 8. A notch 13 is formed in one edge of the leaf 10 and rib 4 is disposed to extend therethrough and prevent independent longitudinal movement of the leaves except after the leaf 10 has been swung onto or against the leaf 1 whereupon the notched portion of the leaf 10 is withdrawn from engagement with the rib as will be obvious upon an inspection of Fig. 1.

The hinge herein described is designed to be used at the right side of a window as shown in Fig. 1 and a similar hinge with its parts disposed opposite to those shown in Fig. 1 can be used at the left side of the window. As shown in Fig. 1 leaf 1 is fastened to the window casing 14 while leaf 10 is fastened to the shutter 15. When the shutter is being closed the hook 11 winds the spring 6 so that should the shutter when closed be left unfastened the spring will promptly swing the same open. When the leaf 10, while being swung open by the spring, passes over the end of the rib 4 it will move downward slightly because the pintle 3 does not ordinarily extend entirely to the end of the extension 9 as is shown in Fig. 3. The shutter is thus locked in open position and cannot be closed unless it is pulled with sufficient force to overcome pressure exerted by the spring 6 and to cause the upper edge of the notch 13 to ride upward on the inclined end 5.

It will be noted that the arm 8 of the spring is bowed so that when the leaves of the hinge are in their normal positions as shown in Fig. 5 the end of this arm 8 will rest upon the leaf 1 and the hook 11 will be relieved of the pressure of the spring. It will also be noted that when the leaves are in their folded or normal positions leaf 10 is out of engagement with the rib 4 and can therefore be withdrawn from the pintle 3 and the hook 11 slid from engagement with arm 8, or vice versa.

While the hinge is preferably used for automatically opening a shutter or door when the same is unlocked it is to be understood that the same may instead be used for swinging a shutter, etc., into closed position. This may be done by securing the hinge between the shutter and the casing of the window in the usual manner so that when the shutter is closed the hinge will be in its normal position, as illustrated in Fig. 5.

The entire hinge can be manufactured very cheaply and will be found very efficient for the purposes intended.

Although the rib 4 has been shown and described adjacent the lower end of the extension 2 it is to be understood that said rib may be placed upon the extension 9 if desired so as to engage the upper portion of leaf 1. This modification is so obvious that illustration thereof is not deemed necessary.

What is claimed is:

1. A hinge comprising a leaf having a pintle, a second leaf having a tubular extension pivotally and removably

- engaging the pintle, a spring coiled about the pintle and having one end held against movement, and means movable with the tubular extension for engaging the other end of the spring, said means being detachable from the spring simultaneously with the removal of the second leaf from the pintle.
2. A hinge comprising a fixed leaf having a pintle, a movable leaf having a tubular extension pivotally and slidably engaged with the pintle, a spring upon the pintle for holding the leaves normally folded, and means for permitting independent longitudinal movement of the leaves after a portion of the rotation of the movable leaf.
3. A hinge comprising a leaf having a pintle and a rib concentric with the axis of the pintle, a second leaf having a tubular extension slidably and pivotally mounted upon the pintle, said leaf being notched to receive the rib, and a spring for holding the leaves normally folded.
4. A hinge comprising a leaf having a pintle and a rib concentric with the axis of the pintle, a second leaf having a tubular extension slidably and pivotally mounted upon the pintle, said leaf being notched to receive the rib, a spring carried by the pintle and engaging the leaf thereof, and means upon said second leaf for detachably

engaging the spring, said spring being disposed to hold the notched leaf normally disengaged from the rib.

5. A hinge comprising a leaf having a pintle and a holding rib, said rib having a tapered end, a second leaf having a tubular extension slidably and pivotally mounted upon the pintle, said leaf being notched to receive the rib, and a spring engaging the leaves and disposed to hold them normally folded and with the notched leaf disengaged from the tapered end of the rib.

6. A hinge comprising separable pivotally connected leaves, a spring secured to one of the leaves, means upon the other leaf for detachably engaging the spring, and a holding rib upon one of the leaves and disposed to be movably engaged by the other leaf, said spring being adapted to normally hold the last mentioned leaf out of engagement with the rib and against the other leaf.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES WALTER KEOWN.

Witnesses:

HUGH MCCRARY,

WILLIAM J. SATTERFIELD.